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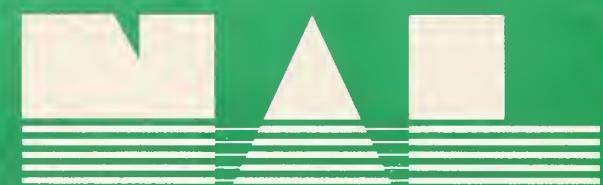
# Ushk Bay Timber Sale(s)

## Final Environmental Impact Statement

### Record of Decision



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Reply To: 1950

Date: August 5, 1994

Dear Reader:

Attached is the Record of Decision (ROD) for the Ushk Bay timber sales. If you requested complete documentation of this decision, the following items should be found in the package:

Record of Decision  
Summary  
Volume I: Final Environmental Impact Statement (EIS)  
Volume II: Appendices A - O

If you requested the quick review documentation of this decision, the package should include only the ROD and Summary. Copies of the entire Final EIS are available for review at Forest Service offices in Juneau, Hoonah, Sitka, Petersburg, Wrangell, and Ketchikan. Copies have also been sent to libraries throughout Southeast Alaska.

The ROD documents my final decision on the selection of an alternative, and the factors considered in reaching the decision. The Effective Date of Implementation for the decision and the Notice of Rights of Appeal are also specified in the ROD.

I want to thank those of you who took the time to review and comment on the Draft Environmental Impact Statement and also those who participated in the Subsistence Hearings. Your interest in the management of the Tongass National Forest is appreciated. I also want to extend a special thank you to those who requested the quick review documentation of this decision in lieu of the entire set of the Final EIS.

Sincerely,

GARY A. MORRISON  
Forest Supervisor

Enclosures

940802 1115 IDT1 1950 MW





# **Ushk Bay Timber Sale(s)**

## **Final Environmental Impact Statement**

### **Record of Decision**

U.S.D.A. Forest Service, Alaska Region  
Tongass National Forest, Chatham Area  
Sitka Ranger District

Lead Agency U.S. D. A. Forest Service  
Tongass National Forest, Chatham Area  
204 Siginaka Way  
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Appendix 1   Poison Cove Selected Alternative Volumes; Ushk Bay Selected Alternative Volumes; Post-harvest Silvicultural Treatments; Enhancement Opportunities

Appendix 2   Road and Unit Cards Not Included in the Final EIS

Appendix 3   Road Management Objectives (RMOs) for the Selected Alternative

Appendix 4   Proportion of Volume Classes 6 and 7 Planned for Harvest for the Selected Alternative

Appendix 5   Monitoring



# Ushk Bay Record of Decision

## Background

The purpose and need for the Ushk Bay project is to make timber available, under the direction contained in the Tongass Land Management Plan and its amendments, to help meet market demand and to establish managed stands capable of long-term timber production.

Analysis of the demand for timber volume through 1995, under terms of the revised long-term contract with Alaska Pulp Corporation (APC), indicated that between 55 and 100 million board feet of volume would need to be made available from the Ushk Bay Project Area in 1994. However, the April 14, 1994, contract termination decision ended APC contract volume obligations. In May, 1994, an independent sale program market assessment (Morse 1994) was completed. The assessment indicates that the Ushk Bay volume is still needed to contribute to the projected independent sale program (Final EIS, Appendix O, Enclosure 1). The Ushk Bay Project was one of a series of timber harvest projects that were being considered within the APC contract boundary. These projects will now contribute to the independent sale program and the Ketchikan Pulp Company contract (Final EIS, Appendix O, Enclosure 2). See Final EIS Appendix A for a discussion of how Ushk Bay was selected.

An evaluation was done on whether the change from a long-term timber sale contract offering to independent timber sales, and other information that has become available since the Draft EIS, constituted significant new circumstance or information relevant to environmental concerns to warrant preparing a supplement to the Draft EIS. The determination was that a supplement to the Draft EIS was not needed before releasing the Final EIS and Record of Decision (ROD). The evaluation is included in Appendix O of the Final EIS.

Public scoping, data gathering and analysis, and document production began with publication of the Notice of Intent in the *Federal Register* May 8, 1992. The Notice of Availability for the Draft EIS was published in the *Federal Register* June 11, 1993, and the public comment period for the Draft EIS closed August 25, 1993. This ROD and Final EIS disclose the environmental effects of the alternatives considered and document the decision for authorization of activities within the Project Area.

## Decision

This Record of Decision documents my decision to select the timber harvest areas to be made available from the Ushk Bay Project Area. My decision includes the following:

- The volume to make available in this area through independent timber sales;
- The location of independent sales;
- The location of timber harvest units;
- The location of road systems;
- The location of log transfer facilities;



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- Mitigation measures and enhancement opportunities for resources other than timber; and
- Whether there may be a significant restriction on subsistence uses.

It is my decision to select Alternative F with modifications, as shown on the Selected Alternative map (Figure R-1), for implementation in the Ushk Bay Project Area. This decision is most responsive to the issues raised during scoping, data gathering and analysis, public responses to the Draft EIS, and testimony received at the subsistence hearings.

Specifically, my decision authorizes the following:

1. Approximately 2,166 acres of commercial forest land will be harvested. Implementation is expected to occur in two independent timber sales. This specified harvest will provide approximately 54 million board feet of sawlog volume and 13 million board feet of utility volume for a total of 67 million board feet. There will be 60 timber harvest units. Table 1 lists the expected independent sales and the sale locations are shown on Figure R-2. ROD Appendix 1 lists each unit, by timber sale, approved for harvest under the Selected Alternative. Design features of the timber harvest units are described in detail on the unit cards in Final EIS Appendix C and ROD Appendix 2.

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Table 1

### Independent Timber Sales

Timber Sale	Volume (MBF)	Sale Date	Duration	Est. Net Stumpage Value
Poison Cove	27,409	1995	2-3 yrs.	\$12.40
Ushk Bay	39,795	1996	3-4 yrs.	\$2.94

Source: Regan, 1994

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2. I modify Alternative F by removing the following harvest units and roads from the Alternative:
  - VCU 279: Unit 33
  - VCU 280: Units 19, 20, 21, 21A, 22, 22A, 23, 138, 138A; Roads 7518, 75188, 75189
  - VCU 281: Units 37A, 67, 68, 78B, 78C, 78D, 78E, 5A, 81, 79B; Portions of roads 75186, 7516N
3. I also add the following units and roads from Alternative C as it is displayed in the Final EIS:
  - VCU 279: Units 110, 116, 117, 118, 119, 50, Groups I and II; a portion of Road 7518
  - VCU 280: Units 118, 119
  - VCU 281: Units 39, 14, Groups II and III; a portion of road 7518
4. I also add the following units from Alternative E as it is displayed in the Final EIS:
  - VCU 279: Unit 105
  - VCU 281: Units 2, 93

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5. I also substitute the following units from Alternative E, as displayed in the Final EIS, for the same units in Alternative F that have a different configuration:
  - VCU 280: 36
  - VCU 281: 3, 16A, 37, 86A, 72
6. The Selected Alternative includes construction of 27.0 miles of new system road, and construction of 15.4 miles of temporary road in order to access the specified timber harvest units. Appendix C of the Final EIS contains the Road Cards with specific direction for the location of each road. ROD Appendix 3 lists the roads and their respective road management objectives for future management of the transportation system.
7. A temporary drive-down log transfer facility (LTF) for nonviolent entry operations, as defined by the Alaska Timber Task Force (less than three feet per second), will be constructed on the south side of Poison Cove. This will be constructed at a -12 percent grade which will require approximately 2,500 cubic yards of clean shot rock fill. This will be used to transfer logs to the water for timber harvest in VCUs 281, 280, and 279. Associated with the Poison Cove log transfer facility will be an upland camp for the logging families, and other support activities needed to make the camp workable (boat dock, fuel storage, sort yard, rafting areas, etc). Another temporary drive-down LTF for nonviolent entry operations will be constructed at a new location at Goal Creek as shown on Alternative C. This will be constructed at a -15% grade which will require approximately 1,500 cubic yards of clean shot rock fill. This will be used to transfer logs to the water for timber harvest in VCUs 279 and 280.
8. A log sorting area will be constructed close to the Poison Cove LTF site. No sorting area will be utilized at the Goal Creek LTF site due to the relatively small amount of timber being transferred.
9. This Record of Decision identifies required mitigation measures to reduce or eliminate adverse environmental effects of the timber harvest and road construction activities specified in the Selected Alternative. Appendix I of the Final EIS and ROD Appendix 5 presents the implementation and effectiveness monitoring that will be conducted to determine how well the resource management objectives have been met.
10. In addition, the description of the Selected Alternative shows enhancement opportunities that are feasible following implementation of this alternative. These opportunities will be included in Sale Area Improvement plan(s) developed in conjunction with each sale.
11. Finally, I have determined that there is a significant possibility of a significant restriction on subsistence use of deer in the Project Area and that this action will in part contribute to that possibility, but that: (a) these actions are necessary, consistent with sound management of public lands; (b) the amount of public land involved to implement the Selected Alternative is (considering sound multiple-use management of public lands) the minimum necessary; and, (c) reasonable measures to minimize impacts on subsistence have been adopted to the maximum extent practicable while still meeting the purpose and need for this project.



## Reasons for Decision

In making my decision, I worked to ensure consideration of all issues, taking into account the competing interests and values of the public who participated in this project. I believe the decision is reasonable. The Selected Alternative continues to provide a beneficial mix of resources and uses to the public within the framework of the existing laws, regulations, poli-

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cies, public needs and desires, and capabilities of the land, while meeting the stated purpose and need for this project.

My decision to implement this Selected Alternative is consistent with the Tongass Land Management Plan (TLMP) as amended, and sound National Forest management. I have considered the need to help maintain an adequate timber supply in support of community stability. I have also considered the need to provide strong protection measures for fish, wildlife, and other resources important to subsistence, recreation, commercial, and other uses.

The units and roads in the Deep Bay drainage are deleted from the Selected Alternative because of the unresolved Native allotment claim at the head of Deep Bay .

Units 5A, 33, 37A, 78B, 78C, 78D, 78E, 79B, and 81 are deleted and the boundaries of Units 4, 5, 8, 11, 12, 27, 28, 29, 30, 30A, 31, 35, 72, 37, 74A, 75, 77, 79, 79A, 82, 86, 90, 101, and 105 are adjusted, as reflected on the unit cards in ROD Appendix 2, because of fisheries, watershed, visuals, or windfirmness concerns. Units 40 and 93 are in the Alternative F and E configurations respectively, but they will be helicopter yarded. Unit 39 (Alternative C configuration) has been broken into two units, with Unit 39 in the Ushk Bay Sale and Unit 39A in the Poison Cove Sale. Both will be helicopter yarded. Units 4A and 30B are a result of a middle portion of the original units 4 and 30 being dropped for fisheries and watershed concerns.

Units 14, 39, 50, 110, 116, 117, 118, 119, Group I, Group II, and Group III from Alternative C and units 2, 3, 36, 37, 72, 86A, 93, and 105 from Alternative E are included in the Selected Alternative in order to offset the timber volume lost by deletions of units or portions of units in Alternative F, in order to meet the purpose and need for this project.

Uneven-aged silviculture or selective harvest is a relatively new silvicultural system in Southeast Alaska. The Ecosystem Management Strategy for Forest Service Programs in Alaska, item I.C.(5), signed in October 1992, requires that the Forest Service test the applicability of silvicultural methods other than clearcutting on selected timber projects. The areas for which uneven-aged silviculture is prescribed (Groups I, II, and III) were identified and designed to ensure the success of the prescription. This includes removing a portion of the trees in small patches, two acres or less in size, within the Groups, while successfully retaining natural regeneration and the other trees around the small patches. The specific logging plan for each area of selective harvest is described on the Unit Cards and an Integrated Silvicultural Prescription will be prepared prior to implementation. Sale administrators will ensure that the logging operations accomplish the harvest objectives for these units. Implementation of these prescriptions is intended to add to our knowledge of alternate treatments for Southeast Alaska timber types.

At this time, the Pacific Northwest Research Station Forest Sciences Lab is initiating a formal study to evaluate alternatives to clearcutting. This study is in the early stages of planning. It is possible that some of the units in the Selected Alternative for Ushk Bay will be included in the study.

In the following summary, I detail how the Selected Alternative addresses each of the significant issues. The list of issues is revised from the DEIS because Issue 2, Timber Resources, in the DEIS is basic to the Purpose and Need and does not affect the alternatives. It was determined not to fit the definition of a significant issue (see Chapter 1 of the FEIS). Refer to Table 3 of this Record of Decision to supplement the following discussion and provide a comparison of the FEIS alternatives and the Selected Alternative.

**Issue 1: Will the proposed timber harvest and road construction activities adversely affect subsistence uses?**

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This issue reflects public concern for the availability of wildlife, marine life, and plants for customary and traditional use by rural Alaska residents.

The Alaska National Interest Lands Conservation Act (ANILCA) requires the Forest Service to determine if proposed activities may significantly restrict use of subsistence resources. If such a finding is made, then ANILCA requires public hearings and determinations regarding actions to minimize impacts prior to proceeding with a project.

Chapter 4 of the Final EIS contains the ANILCA 810 subsistence analysis. In summary, the analysis concludes that there is a significant possibility of a significant restriction of subsistence use of Sitka black-tail deer in the Project Area for the communities of Haines, Petersburg, Sitka, and Wrangell. This is a possibility regardless of which alternative is implemented, including the No-Action Alternative. Among these four communities, there is sufficient habitat capability in Wildlife Analysis Areas (WAAs) hunted by community residents to meet subsistence needs of all communities in the foreseeable future except for Sitka. The analysis also concludes that there is a significant possibility of a significant restriction on fish and shellfish based on changes in access during the period of active timber harvest for alternatives that include an LTF or logging camp in Ushk Bay. The Selected Alternative excludes LTFs and logging camps from Ushk Bay. The foreseeable effects of the action alternatives do not represent a significant possibility of a significant restriction for other resources used for subsistence.

Access to historic subsistence-use areas may be affected where logging activities (LTFs, logging camps) are located in the beach fringe. This is because traditional subsistence access is by boat to the beaches of the Project Area. Motor vehicle access is provided only by barge or boat since the Alaska Marine Highway ferries do not stop within the Project Area. Because of this limited access, only a minor increase in access to the area is expected. Roads will be located away from the beaches and Road Management Objectives for the Selected Alternative discourage vehicular access.

Any displacement of subsistence users that may occur is likely to be to other areas within a household's or community's historical range. None of the four potentially restricted communities averaged more than 7 percent of its subsistence harvest of deer from the Project Area during 1987 to 1991. The community of Sitka averaged 7 percent and the other three communities averaged one percent or less. Furthermore, any displacement that may occur would likely be temporary until activities within the Project Area conclude in 3 to 5 years.

The Selected Alternative reflects efforts of the Forest Service to minimize effects on subsistence resources used by those rural communities that would be most likely to receive the highest priority for game in the event of an ANILCA Section 804, Tier II restriction. The Selected Alternative eliminates timber harvest in the Deep Bay watershed which avoids potential subsistence conflicts with an LTF in Deep Bay and reduced habitat capability for subsistence species. No logging camp or LTF will be developed in Ushk Bay to avoid, to the extent practicable, conflicts with subsistence access, competition and resource abundance in this portion of the Project Area. Road Management Objectives, as mentioned above, will discourage vehicular access, which will reduce the potential for increased competition from all terrain vehicle (ATV) users.

### **Issue 2: How will the timber harvest and road construction activities affect recreation and visual resources?**

This issue addresses concerns for outdoor recreation and scenic viewing opportunities offered in and around the Ushk Bay Project Area and the effects timber harvest and transportation system development may have upon these opportunities.

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The Selected Alternative will result in an overall decrease in acres of Primitive and Semiprimitive Non-motorized opportunities of 32 percent, for the Ushk Bay Project Area as a whole. However, the Project Area contains only a small amount of the total recreation opportunities on the Tongass National Forest, and there are similar recreation opportunities nearby. The Upper Hoonah Sound LUD II area, the West Chichagof-Yakobi Wilderness, and the proposed Big Bear/Baby Bear Bays State Marine Park are immediately adjacent to the Project Area. In addition, the favorite anchorages in Ushk and Deep Bays, and overall scenic quality in Deep Bay, will not be affected by the Selected Alternative. None of the constructed road system will be maintained open following project completion.

Timber harvest activities would take place in three Value Comparison Units (VCUs). Ushk Bay, Poison Cove, and Deep Bay VCUs would be scheduled for some level of harvest with the Selected Alternative. The level of timber harvest and road construction will result in either a Modification or Maximum Modification Visual Quality Objective along Peril Strait from Ushk Bay to Goal Creek. No timber harvest activities will be visible in the Project Area along Peril Strait south of Goal Creek or from within Deep Bay. Selective harvest is prescribed for units in visually sensitive areas along Peril Strait to mitigate visual impacts. The LTFs planned for development in Poison Cove and at Goal Creek would have a strong visual impact when viewed from the foreground, and little, if any, visual effect from background views (Final EIS, Chapter 4). No LTF or logging camp facility will be located in Ushk Bay. Roads and harvest activity will be located away from the Ushk Bay beach to minimize impacts.

## **Issue 3: What effects will timber harvest and road construction activities have on the Native allotment land claim at Deep Bay?**

This issue addresses concerns about impacts to an area at the head of Deep Bay that is an unresolved Native allotment land claim.

The Selected Alternative eliminates timber harvest and road construction in the Deep Bay drainage, which avoids any impacts to the Native allotment land claim.

## **Issue 4: What would be the economic and social effects of logging and associated development on Southeast Alaska residents?**

This issue reflects concerns about community employment and stability, and maintaining Alaskan lifestyles.

Implementation of the Selected Alternative authorizes harvest of approximately 67 million board feet of timber volume. Additionally, it authorizes 42.5 miles of road construction and construction of two LTFs. Specified harvest of this level maintains approximately 303 jobs directly related to timber harvest, road construction, and wood product processing. This level of harvest also maintains approximately 72 jobs in indirect employment associated with the service and support sectors. This results in 375 jobs maintained, with a value of \$13.2 million of personal income from wages and salaries.

None of the alternatives are projected to have any effect on income or employment opportunities in the sport or commercial fishing industries or those related economic sectors. Timber harvest activities may displace outfitter/guide use of portions of the Project Area until a few years after completion of harvest activities. Marketable recreational experience will change from a wildland experience to a roaded modified experience in areas affected by timber harvest activities. Because of the availability of alternative areas that could provide similar commercial opportunities, and because the Selected Alternative affects only some of the inventoried Recreation Places in the Project Area, no significant impact is expected on employment and income opportunities in the recreation and tourism industry.

Using the pond log values and logging costs from the fourth quarter of 1993, and normal (100 percent) profit and risk, the resulting estimated net stumpage value is positive for both sales.

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The Selected Alternative, therefore, will be an economical offering under current and anticipated future market conditions. The estimated net stumpage value for each independent sale is shown in Table 1.

### **Issue 5: How Will Timber Harvest and Road Building Activities Affect Wildlife Habitat?**

This issue includes concern over several wildlife species and habitat important to maintenance of wildlife populations.

The greatest direct effect to wildlife habitats will be the loss of old-growth habitat and change of forest habitat. Special emphasis habitats such as beach and estuary fringe are largely protected through timber harvest unit and road location. Old-growth habitat will be reduced by 14 percent.

All action alternatives, including the Selected Alternative, will decrease habitat capabilities for the Management Indicator Species (MIS) as much as 19 percent, but in most cases, less than 12 percent. Habitat capability is calculated utilizing models and does not necessarily indicate current or future populations, but rather is a means to measure potential effects.

The Project Area will remain a diverse and largely natural environment. In general, wildlife habitats will remain well connected by beach and estuary fringe, stream corridors and the myriad of muskegs, steep slopes, and areas not scheduled for harvest. Areas of undisturbed old growth that protect natural ecosystem processes and landscape scale wildlife species are maintained (see Figure R-1). Those areas of old growth that are not altered by the activities proposed in the Selected Alternative will retain their habitat characteristics. There are no large or medium Habitat Conservation Areas (HCAs) recommended for the Project Area by the Population Viability Committee to prevent wildlife habitat fragmentation (Final EIS, Chapter 4). Roads will not be maintained for vehicle travel following project completion, thus wildlife will not be affected by additional access (see RMOs in Appendix 3).

### **Issue 6: How would timber harvest, road building activities, and LTFs affect fish and shellfish habitat?**

This issue addresses public concern for protecting streams that provide habitat to anadromous and resident fish and for protecting shellfish habitat in the marine environment.

Chapter 2 of the Final EIS concludes that the potential effects on fish and shellfish are minimal for all alternatives. All alternatives are designed and expected to meet the requirements of the Clean Water Act. Implementation of the Tongass Timber Reform Act (TTRA) requirements to provide a minimum 100-foot buffer on Class I streams and Class II streams flowing directly into Class I streams will prevent direct stream channel impacts from timber harvest and road construction. Adherence to Best Management Practices (BMPs) outlined in the Soil and Water Conservation Handbook (FSH 2509.22) during timber harvest and road construction activities will minimize the potential for impacts on fish habitat.

No significant changes in stream temperature regimens, large woody debris recruitment, or stream nutrient cycles are expected as a result of the timber harvesting activities. Riparian buffers as prescribed on the unit and road cards in Appendix C of the Final EIS and ROD Appendix 2 will minimize any adverse effects to water quality and fish habitat resulting from the authorized activities. Harvest units have been designed to minimize the potential for blowdown adjacent to streams.

Application of the LTF siting guidelines developed by the Alaska Timber Task Force will minimize the potential effects of LTFs on shellfish populations. Construction of drive-down type LTF facilities with a “no-splash” operation is authorized at Poison Cove and Goal Creek.

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Log transfer facility development is contingent upon approval of permits obtained from those agencies identified at the end of Final EIS Chapter 1. Should the permitting process result in significant changes to either the location or design of one or more of the log transfer facilities, such changes would be evaluated in an interdisciplinary manner according to NEPA and the results of the analysis documented. If such changes are significant, then my decision would be supplemented prior to development of the log transfer facility.

## Public Involvement

Public involvement has been instrumental in identifying issues, formulating alternatives, and influencing this decision. Public scoping and involvement activities for the Ushk Bay project are listed in Appendix B of the Final EIS. A summary of the significant issues used to govern the interdisciplinary analysis was provided in the previous section of this document and in Chapter 1 of the Final EIS.

## Coordination with Other Agencies

From the time scoping was initiated, meetings and other contacts with interested State and Federal agencies have occurred. Issues were discussed and information was exchanged. Appendix B of the Final EIS lists the meetings and chapter 6 identifies the agencies who were informed of, and/or involved in the planning process. The U.S. Army Corps of Engineers and U.S. Environmental Protection Agency were cooperators under provisions of the National Environmental Policy Act because of their role in issuing LTF permits.

## Alternatives

### Alternatives Considered in Detail

The following six alternatives were considered in detail in the Final EIS. For a complete description of these alternatives, refer to chapter 2 of the Ushk Bay Final EIS. At the conclusion of this section, Table 2 lists the scheduled activities and major outputs for each of the six alternatives considered in detail along with the Selected Alternative.

Alternative A. The theme of this alternative is to propose no timber harvest or road construction in the Ushk Bay Project Area. A “No Action” alternative is required by NEPA, and this alternative serves as the benchmark by which effects of the action alternatives are measured. Implementation of TLMP to meet Forest Service goals would likely require timber harvest in the Project Area at some time in the foreseeable future, even if this “No Action” alternative was adopted in this decision.

Alternative B. The theme of this alternative is to consolidate timber harvest in areas accessible to proposed LTFs in Ushk Bay and Poison Cove, with no road connection between the two LTFs, and avoid harvest of timber in the area near Deep Bay and along Peril Strait.

Alternative C. The theme of this alternative is to distribute timber harvest throughout the Project Area, with no road connections between the LTFs, but with selective harvest along Peril Strait to mitigate visual effects.

Alternative D. The theme of this alternative is to distribute a light timber harvest throughout the Project Area to facilitate a later entry to provide areas of different forest vegetation age classes within the Project Area. This alternative would include a road connection between

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LTFs in Ushk Bay, Deep Bay, and Poison Cove for recreational use.

Alternative E. The theme of this alternative is maximizing availability of timber within the Project Area that meets TLMP standards and guidelines, while avoiding an LTF in Deep Bay

**Table 2**  
**Activities and Outputs (by Alternative)**

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>Selected Alternative</b>
<i>Total Acres Harvested</i>							
	0	1,670	3,096	1,430	2,783	1,898	2,166*
<i># Harvest Units</i>							
	0	54	90	46	93	58	60
<i>Average Size Harvest Units (Ac.)</i>							
	0	31	30	31	30	33	33
<i>Roads (Mi.)</i>							
	0	36	62	49	65	47	42
<i>Number of LTFs</i>							
	0	2	4	3	3	1	2
<i>Number of Camps</i>							
	0	1	1	1	1	1	1
<i>Volume - Net Sawlog plus Util. (MMBF)</i>							
	0	50.6	84.8	46.5	90.3	62.4	67.2*
<i>Employment (Number of Jobs)</i>							
	0	290	478	299	509	359	375

\* includes inter-unit road right-of-way

by proposing a road connection between the Deep Bay drainage and the LTF in Ushk Bay.

Alternative F. The theme of this alternative is avoiding LTFs and logging camps in Ushk and Deep Bays, minimizing timber harvest and LTFs in the visually sensitive areas along Peril Strait, but to otherwise maximize availability of timber.

### Alternative Eliminated from Detailed Consideration

An alternative which eliminated harvesting timber in the drainages tributary to Ushk Bay and which consolidated the harvest in other drainages of the Project Area was considered. The total recoverable volume from such an alternative would be so low that it would not be economically reasonable, therefore this alternative was eliminated from more detailed consideration. The alternative of avoiding timber harvest in the Ushk Bay drainages is embodied in the No Action alternative.

### Environmentally Preferred Alternative

There is no single factor that can be used to determine which alternative is environmentally preferred. Maintaining the basic productivity of the land and the quality of lifestyle of the local residents are vitally important.

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Based on the comparison of the alternatives shown in Table 2 and as displayed in chapter 2 and 4 of the Final EIS, Alternative A, the “No Action” alternative, would cause the least environmental disturbance. Among the action alternatives, Alternative B is the environmentally preferred alternative. This alternative has the second lowest level of acres proposed for harvest but has the fewest miles of road construction and associated stream crossings, and avoids Deep Bay and the visually sensitive area along Peril Strait.

The Selected Alternative is more environmentally preferred than Alternatives C, D, E, and F because of modifications incorporated in response to comments on the Draft EIS which mitigate potentially adverse environmental effects. The minimum number of LTFs is proposed to harvest the volume authorized, some units are dropped or unit boundaries adjusted to provide additional watershed and fisheries protection, Deep Bay is avoided, and selective harvest is prescribed for the visually sensitive area along Peril Strait.

## Mitigation



Applicable standards and guidelines of the Tongass Land Management Plan of 1979 (as amended), the Draft Tongass Land Management Plan Revision, the Alaska Regional Guide, and applicable Forest Service Manuals and Handbooks will minimize or negate many potentially adverse environmental effects from timber harvest and road construction. Water quality and fisheries habitat are protected through the application of Best Management Practices (BMPs) stated in the Soil and Water Conservation Handbook (FSH 2509.22) and the direction contained in the Aquatic Habitat Management Handbook (FSH 2609.24). In addition, the Tongass Timber Reform Act (TTRA) requires a minimum 100-foot buffer for all Class I streams and Class II streams directly flowing into Class I streams. The buffers and other stream protection measures adopted in this decision equal or exceed Tongass Timber Reform Act requirements.

Measures were applied in the development of the project alternatives, including the Selected Alternative, and in the location of the harvest units and road corridors to avoid, reduce, minimize or eliminate the adverse affects of timber harvest related actions. The Mitigation Measures section of Chapter 2 of the Final EIS discusses those measures common to all alternatives. Mitigation measures adopted include all practicable means to avoid or minimize the environmental harm from the proposed actions (40 CFR 1505.2(b)). The Final EIS includes Harvest Unit Cards and Road Cards (Appendix C) which incorporate site-specific mitigation. A more detailed description of the Selected Alternative mitigations is included below.

In the Selected Alternative, a number of measures to protect water quality and fish production have been included. Class III streams will be protected to prevent impact on downstream Class I or II streams as well as to prevent sedimentation and soil erosion. Unit 33, in the Poison Cove vicinity, has been dropped specifically to protect fish habitat and production. Several units and sections of units have also been dropped in order to provide additional protection to water quality and fisheries habitat.

Mitigation measures and BMPs designed to protect water quality and fisheries habitat will likewise reduce impacts on forest soils. Soils with an extreme mass-wasting hazard have been avoided in the design of harvest units. Partial or full suspension of logs during yarding will be required in areas of units with high hazard soils. Trees will be felled away from v-notches and split yarding of v-notches will be required. In the Selected Alternative, a number of units and parts of units have been dropped in order to reduce impacts on forest soils. For example, Unit 81 and the western portion of Unit 12 were dropped due to their close proximity to a slide area. Settings in FEIS Units 75, 4, and 86 have been dropped because of the presence of v-notches and high hazard soils. Past experience indicates these measures are effective. In two

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units (8 and 90), there will be areas in which only 30% of the existing volume will be harvested. Harvest will be done in such a way that the remaining standing timber is feathered, reducing the risk of blowdown and resulting impacts on soils, particularly in adjacent stands. Selective harvest and feathering have not been widely used in Southeast Alaska, but the location of the two areas, both topographically and in relation to adjacent stands, in conjunction with the layout directions and harvest method, should ensure that adverse effects on soils are minimized.

No logging camp or log transfer facility will be located in Ushk Bay. This is being done in response to the numerous comments from the public, as well as state and federal agencies about potential biological and sociological adverse impacts. This decision will avoid potential conflicts over recreational anchorages and subsistence crabbing in Ushk Bay.

Three areas along Peril Strait have been identified for uneven-aged management by the group selection method. Group selection cutting as an alternative to clearcutting was originally proposed in Alternative C. In that alternative, there are six group selection areas in which approximately 25% of each area would be harvested in one to two acre groups. The primary reason for proposing this rather than clearcutting was to reduce the visual impact as viewed from boats in Peril Strait. The Selected Alternative goes even further in this respect. Here there are three group selection areas from which 15% (Group III), 20% (Group II) and 25% (Group I) of the acres will be harvested. Harvest will be by helicopter, reducing associated impacts of road building on visual and other resources. Openings will be located and shaped so as to minimize their visibility from Peril Strait. The three areas will be managed on a 120- to 200-year rotation. The extended rotations are consistent with the direction in the 1985-86 Amendment to TLMP for Visual Management Class I areas in LUD III and IV VCUs.

Further measures to decrease impacts to the visual and recreation resources are dropping highly visible sections of units, and feathering the boundaries of some of the more visible units. See Unit Cards in Final EIS Appendix C for a more detailed description. Uneven aged management by group selection and unit boundary feathering have been done on a very limited scale in Southeast Alaska. Preliminary evidence is that these measures do reduce adverse effects to the visual and recreation resource.

To avoid adverse effects on wildlife habitat values, units were located outside of the beach and estuary fringe habitats wherever practicable, thereby reducing the potential to adversely impact high value habitats. Maintaining travel corridors for wildlife and retention of snags (where safe to do so) are measures individually identified on the road or unit cards in the Final EIS (Appendix C) which minimize adverse effects to wildlife. Additionally, all roads are to be closed following the completion of sale activities. Drainage structures may be removed if necessary for long-term resource protection and erosion control (waterbars, grass seeding) will be performed. Dropping all units in the vicinity of Deep Bay will reduce the acres of old-growth harvest and consequently reduce adverse effects to wildlife habitat. These measures have been used effectively in the past throughout Southeast Alaska.

To manage for subsistence resources, those measures which protect fish and game resources also generally serve to protect the availability of subsistence resources. For the Selected Alternative, as mentioned above, all roads will be closed following completion of sale activities. Past experience indicates that this is an effective measure to limit non-traditional use. The lack of a camp facility or LTF in Ushk Bay will also have the effect of limiting non-traditional use in this area, thereby protecting the availability of subsistence resources in Ushk Bay.

## Monitoring and Enforcement

A monitoring program is the process by which the Forest Service can evaluate whether or not the resource management objectives of the Final EIS have been implemented as specified, and

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whether or not the steps identified for mitigating the environmental effects were effective. Three levels of monitoring are recognized. The first two levels, implementation monitoring and effectiveness monitoring, are feasible at the project level. The third level, validation monitoring, is conducted at the Forest wide level.

Applicable Monitoring requirements are specified in Appendix I of the Final EIS and ROD Appendix 5. For each monitoring item, an objective, desired result, method of measurement, threshold and corrective action are identified, along with the responsible staff. Monitoring activities may reveal results that deviate from planned effects, in which case corrective actions are prescribed (40 CFR 1505.2(c)).

The Chatham Area Forest Supervisor is responsible for ensuring that project implementation, mitigation, monitoring and enforcement is accomplished as specified.

## Findings Required by Law

### National Forest Management Act

The National Forest Management Act (NFMA) requires specific determinations in this Record of Decision including consistency with existing Forest Plans and Regional Guides. It also requires a determination of clearcutting as the optimal method of harvesting and specific authorization of clearcuts over 100 acres in size.

Tongass Land Management Plan and Alaska Regional Guide. This decision is consistent with the Alaska Regional Guide and the Tongass Land Management Plan of 1979, as amended. I have reviewed the management direction and the schedule of activities for the VCUs included in the Selected Alternative, and find the Selected Alternative to be consistent with these elements. The areas of undisturbed old-growth wildlife habitat maintained in this alternative exceed the standards for retention established in TLMP.

Although not required, the activities authorized in this decision are consistent to the extent practicable with the proposed standards and guidelines and management prescriptions of the Proposed Revised Forest Plan.

Clearcutting as the Optimal Method of Harvesting. The Alaska Regional Guide established silvicultural and management standards for western hemlock - Sitka spruce forest type (Alaska Regional Guide, page 3-18). Even-aged management in the form of clearcutting is, according to the Regional Guide, to be used where the management objective is to meet timber production objectives established in the Forest Plan, where there is a risk of dwarf mistletoe reinfection and where risk of windthrow is determined to be high. Dwarf mistletoe is somewhat of a problem in the Ushk Bay Project Area, particularly on the north shore of Ushk Bay. All of the harvest units being proposed in the Selected Alternative have a high risk of windthrow. All units in the Selected Alternative, except the three Groups and the two units (8 and 90) with areas of selective harvest and feathering, both discussed in the Mitigation section, are prescribed for clearcut harvest. Clearcutting of the proposed harvest units will meet the objective of maintaining fast-growing, mistletoe-free stands of mixed species and is the optimum method of harvesting, considering the following factors referenced in the Alaska Regional Guide:

The thin bark and shallow roots of hemlock and spruce make them particularly susceptible to logging injury, which leads to decay. Losses from decay fungi are high, especially in the old-growth forests of Alaska. Conversion from old to young growth by clearcutting has the greatest potential for reducing decay.

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Hemlock dwarf mistletoe, *Arcennthobium tsugense*, an important disease of western hemlock can best be controlled by clearcutting. Elimination of residual overstory trees infected with dwarf mistletoe prevents infection of western hemlock in the new stand.

Exposure to the sun raises soil temperature, which speeds decomposition, thereby improving the productivity of northern sites.

Clearcutting favors regeneration of Sitka spruce by destroying advance hemlock regeneration and by creating more favorable conditions for post-logging reproduction of spruce.

Risk of blowdown in residual stands is eliminated. The chance of blowdown along cutting boundaries is increased but can be reduced through proper design of cutting units.

Natural seed fall is generally adequate for regeneration and most young stands are dense.

Logging costs are lower than with other systems.

Clearcuts Over 100 Acres in Size. Unit 13 is 121 acres and is the only unit that exceeds 100 acres. Unit 13 exceeds 100 acres because of natural and biological hazards to residual trees and surrounding stands and logging system and transportation system requirements as allowed for in the Alaska Regional Guide. This unit was clearly displayed for comment during the 75-day review of the Draft EIS. This 75-day public comment period meets the requirements of the Alaska Regional Guide for approval of units over 100 acres. Based on public review and the reasons listed for the unit being greater than 100 acres above, this unit is authorized for harvest as designed.

### Tongass Timber Reform Act

Harvest units were designed and will be located to maintain a minimum 100-foot buffer zone for all Class I streams and Class II streams that flow directly into Class I streams as required in Section 103 of the TTRA. The actual widths of these buffer strips will often be greater than the 100-foot minimum. The design and implementation direction for the Selected Alternative incorporate BMPs for protection of all stream classes.

Per Section 301 of the TTRA, the Ushk Bay Project was planned, management requirements were applied, and environmental analysis procedures were followed consistent with procedures for independent National Forest timber sales. Section 301(c)(2) of the TTRA modified the Alaska Pulp Corporation (APC) and Ketchikan Pulp Company contracts to require proportional harvest of Volume Classes 6 and 7 timber. The statute does not impose proportional harvest as a requirement on independent sales. The APC long-term contract termination eliminates proportional harvest as an applicable statutory requirement for the Ushk Bay Selected Alternative that will be implemented through independent timber sale contracts.

However, analysis of proportional harvest of Volume Classes 6 and 7 was performed using the procedures in Forest Service Sale Preparation Handbook 2409.18, Region 10 Supplement No. 2409.18-93-3 for the Selected Alternative. It was determined that upon completion of the Selected Alternative's harvest, proportionality consistent with FSH 2409.18 direction for Management Areas C39 and C40 will result. Refer to ROD Appendix 4 for the analysis of the proportion of Volume Classes 6 and 7 planned for harvest with the Selected Alternative. Forest Service methodology used to implement section 301(c)(2) has been challenged in court, in Wildlife Society et al. v. Barton, J93-001 CIV (D. Alaska). An alternative methodology is being evaluated but is not available at this time.

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### Endangered Species Act

The Selected Alternative will not have a direct, indirect, or cumulative effect on any threatened, endangered or sensitive species in the Ushk Bay Project Area. A biological assessment is included in Appendix J of the Final EIS. I have determined that this action will not have any adverse impacts on any threatened or endangered species.

### Bald Eagle Protection Act

The Selected Alternative will not have a direct, indirect, or cumulative effect on any bald eagle.

Management activities inconsistent with current bald eagle use within 330 feet of an eagle nest tree are restricted by a 1990 Memorandum of Understanding (MOU) between the Forest Service and the U. S. Fish and Wildlife Service to facilitate compliance with the Bald Eagle Protection Act. Three variances from the MOU have been obtained for implementation of the Selected Alternative for construction of roads within 330 feet of known eagle nest trees. A variance has also been issued for conducting helicopter operations within 1/4 mile of eagle nests and documentation is included in Appendix N of the Final EIS.

### Clean Water Act

The location of harvest units and roads for the Selected Alternative was guided by standards, guidelines, and direction contained in the current TLMP, the proposed TLMP Revision, the Alaska Regional Guide, and applicable Forest Service manuals and handbooks. The unit cards and road cards (Appendix C in the Final EIS and ROD Appendix 2) contain specific details on practices prescribed to prevent or reduce non-point sediment sources. Implementation with site specific application and monitoring of approved BMPs, will comply with applicable State Water Quality Standards Regulations. These regulations provide for variances from antidegradation requirements and water quality criteria. The harvest and road building operators will be responsible for compliance, including obtaining any variance required by the State, and will be monitored for compliance by the Forest Service. The Forest Service expects the Ushk Bay Project activities to fully qualify for any variance required by the State, according to the criteria in 18 AAC 70.015.

A monitoring plan to detect and evaluate possible effects of bark accumulations, oil sheens, and surface runoff will be implemented as a part of the permitting process for log transfer facilities (BMP 14.4, FSH 2509.22).

### National Historic Preservation Act

Cultural resource surveys have been conducted in the Project Area. The State Historic Preservation Officer has been consulted, and the provisions of 36 CFR part 800 have been complied with. The Forest Service timber sale contract contains enforceable measures for protecting any undiscovered cultural resource that might be encountered during sale operations. All ground-disturbing activities associated with this action have received cultural resource clearance by the State Historic Preservation Officer. Based on surveys conducted by professional archaeologists in the project area, I have determined, there will be no significant effects on cultural resources.

### Federal Cave Resource Protection Act of 1988

The actions in the Selected Alternative will not have a direct, indirect, or cumulative effect on any significant cave in the Ushk Bay Project Area. No cave resources have been documented in the Project Area and field work done for this analysis failed to discover any caves (Final EIS, Chapter 3).

### Subsistence Finding: ANILCA Section 810

A subsistence evaluation was conducted for the six alternatives considered in detail in accordance with ANILCA Section 810. An open house followed by an ANILCA Section 810 hearing was held in Sitka on July 19, 1993.

The evaluation of comments from the public, subsistence hearing testimony, and additional

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analysis, indicates the following:

The potential foreseeable effects from the action alternatives in the Ushk Bay Project Area do not indicate a significant possibility of a significant restriction of subsistence uses for brown bear, furbearers, marine mammals, waterfowl, and other foods such as berries and roots.

There is a significant possibility of a significant restriction of subsistence use of Sitka black-tailed deer in the Project Area, regardless of which alternative is implemented, including the "No Action" alternative. This possibility of restriction of subsistence use is for the communities of Haines, Petersburg, Sitka, and Wrangell.

Among these communities, there is sufficient habitat capability in Wildlife Analysis Areas where residents successfully harvest deer to meet subsistence needs of all communities in the foreseeable future except for Sitka.

There is also a significant possibility of a significant restriction of subsistence use of fish and shellfish, based on changes in access during the period of active timber harvest, for alternatives that include an LTF or logging camp in Ushk Bay.

Based on a review of the subsistence hearing testimony and the analysis conducted in the Final EIS, it is apparent that all of the action alternatives involve some potential to impact subsistence uses. There is no alternative that would meet TLMP direction and yet avoid a significant possibility of a subsistence restriction somewhere in the Forest. Therefore, based on the analysis of the information presented in the Final EIS, it is my determination these actions are necessary, consistent with sound management of public lands.

The amount of public land involved to implement the Selected Alternative is (considering sound multiple-use management of public lands) the minimum necessary. Conversion of old-growth forest into second-growth forest affects habitat capability for deer and other old-growth dependent species wherever it occurs on the Tongass National Forest, and habitat is used forestwide by such species.

The entire Tongass National Forest is used by one or more rural communities for subsistence purposes for deer hunting (TRUCS, Forest Service 1990b). The areas of most subsistence use are the areas adjacent to existing road systems, beaches and the areas in close proximity to the communities. Much effort was taken to protect the highest value subsistence areas. For example, beach fringe is one of the highest use subsistence areas and three percent or less will be impacted with the Selected Alternative.

It is not possible to lessen harvest in one area and concentrate it in another without impacting one or more rural communities' important subsistence use areas. In addition, harvestable populations of game species could not be maintained in a natural distribution across the Forest if harvest was concentrated in specific areas. A well-distributed population of species is also required by the Forest Service regulations implementing the NFMA. Therefore, I conclude the acres scheduled for harvest in the Selected Alternative meet sound multiple-use management of public lands, and involve the minimum amount of public land used for subsistence. Furthermore, the Selected Alternative resolves resource concerns reflected in the public issues associated with this EIS.

Impacts on subsistence have been minimized through the development of the individual harvest units and road corridors, and through the formulation of the alternatives. Mitigation measures applicable to all resources including subsistence are described in this ROD. It is my determination that reasonable measures to minimize impacts on subsistence have been adopted to the maximum extent practicable while still meeting the purpose and need for this project.

The Selected Alternative reflects special efforts by the Forest Service to minimize the effects on resources used for subsistence by those rural communities that would be most likely to receive the highest priority in the event of an ANILCA section 804 "Tier II" restriction.

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### Executive Orders 11988 and 11990

Executive Order 11988 directs Federal agencies to take action to avoid, to the extent possible, the long and short-term adverse impacts associated with the occupancy and modification of floodplains. The numerous streams in the Ushk Bay Project Area makes it impossible to avoid all floodplains during timber harvest and road construction. The design of the Selected Alternative and the application of Best Management Practices combine to minimize adverse impacts on floodplains.

Executive Order 11990 requires Federal agencies to avoid to the extent possible the long and short-term adverse impacts associated with the destruction or modification of wetlands. The Selected Alternative avoids most identified wetlands, however many small wetlands or muskegs occur as inclusions within forested areas. These areas may be altered by timber harvest or road construction, however techniques and practices required by the Forest Service serve to maintain the wetland attributes. It is estimated there will be no net loss of wetlands with any of the alternatives. Soil moisture regimes and vegetation on some wetlands may be altered in some cases; however, these altered acres would still be classified as wetlands and function as wetlands in the ecosystem.

### Coastal Zone Management Act

The Coastal Zone Management Act of 1976 (as amended) excludes Federal lands from the Coastal Zone. However, the act requires that when Federal agencies conduct activity or undertake development affecting the coastal zone, they be consistent to the maximum extent practicable with the approved State Coastal Management Program.

The Alaska Coastal Management Plan incorporated the Alaska Forest Resources and Practices Act of 1979 (as revised) as the applied standards and guidelines for timber harvesting and processing. The Forest Service Standards and Guidelines and Mitigation Measures described in Chapter 2 of the Final EIS are fully consistent with the State Standards.

Based on the analysis in the Final EIS, review of the Alaska Forest Practices Act, and comments from the City of Sitka and State agencies on the DEIS, the action and activities are consistent to the maximum degree practicable with the Alaska Coastal Management Plan.

### Federal and State Permits

Federal and State permits necessary to implement the authorized activities are listed at the end of Chapter 1 of the Final EIS. These permits are results of the National Policy and Laws briefly described above.

## Implementation of This Decision

Implementation of this decision may occur no sooner than 50 days from the date of publication of the notice of the decision in the Juneau Empire, the official newspaper of record.

This project will be implemented in two or more timber sales in accordance with Forest Service Manual and Handbook direction for Timber Sale Project Implementation in FSM 2432.3 Gate 3 and FSH 2409.18 Sale Prep. This direction provides a bridge between project planning and implementation, and will ensure execution of the actions, environmental standards, and mitigations approved by this decision, and compliance with TTRA and other laws.

Implementation of all activities authorized by this Record of Decision will be monitored to ensure that they are carried out as planned and described in the Final EIS, ROD, and planned unit and road cards, unless they are modified consistent with direction in FSM 2432.3 and FSH 2409.18.

Appendix C of the Final EIS and ROD Appendix 2 contain the planned unit and road cards. These cards are an integral part of this decision because they document the specific resource



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concerns, management objectives, and mitigation measures to govern the layout of the harvest units and construction of roads. These cards will be used during the implementation process to ensure that all aspects of the project are implemented within applicable standards and guidelines and that resource impacts will not be greater than those described in the EIS. Similar cards will be used to document any changes to the planned layout as the actual layout and harvest of the units occurs with project implementation. The implementation record for this project will display each harvest unit, transportation facility, and other project components as actually implemented, any proposed changes to the design, location, standards, and guidelines, or other mitigation measures for the project, and the decisions on the proposed changes.

Any proposed changes to authorized project actions will be fully subject to an interdisciplinary review process and the documentation, public involvement, and other requirements of the National Environmental Policy Act (NEPA), the National Forest Management Act of 1976 (NFMA), section 810 of the Alaska National Interest Lands Conservation Act (ANILCA), the Tongass Timber Reform Act (TTRA), the Coastal Zone Management Act (CZMA), and other laws concerning proposed actions.

The Forest Supervisor will determine whether further NEPA, ANILCA, TTRA or other documentation or disclosure, opportunity for public involvement, or other action is necessary before proceeding with any action that deviates from the planned activity. Connected or interrelated proposed changes regarding particular areas or specific activities will be considered together in making this determination. Cumulative impacts will be considered.

In determining whether and what kind of further NEPA action is required, the Forest Supervisor will consider the criteria for whether to supplement an existing Environmental Impact Statement in 40 CFR 1502.9(c), and in particular, whether the proposed change is a substantial change to the selected alternative as planned and already approved, and whether the change is relevant to environmental concerns. As part of this determination, the Supervisor will review whether the change would as an initial proposed action be categorically excluded from preparation of an Environmental Assessment (EA) or EIS on the basis of criteria in FSH 1901.15, Chapter 30. A determination that correction, supplementation, or revision of the EIS or ROD is not required will be documented in a project implementation file memorandum. FSH 1909.15, Sections 18.1 adn 18.2.

Many minor changes to harvest units, transportation facilities, or other project components may be categorically excluded from documentation in an EA or EIS or otherwise not require an existing EIS or ROD to be corrected, supplemented, or revised. Besides documentation in a project implementation file memorandum, these minor changes may still require appropriate scoping, environmental analysis, documentation in a Decision Memo, and public notice to comply with FSH 1909.15.

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### Right to Appeal

This decision is subject to administrative appeal. Organizations or members of the general public may appeal this decision according to Title 36 Code of Federal Regulations (CFR) 215. The appeal must be filed within 45 calendar days of the date that legal notification of this decision is published in the Juneau Empire, the official newspaper of record. The Notice of Appeal must be filed with:

Phil Janik  
Regional Forester  
USDA Forest Service, Region 10  
P.O. Box 021628  
Juneau, AK 99802-1628

It is the responsibility of those who appeal a decision to provide the Regional Forester sufficient narrative evidence and argument to show why the decision by the Forest Supervisor should be changed or reversed. Copies of 36 CFR 215 are available from any Forest Service Office.

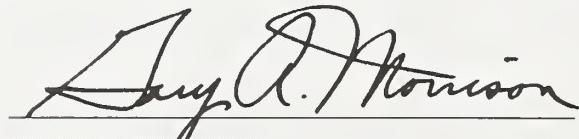
The first timber sale is planned to be made available as part of the current timber supply in September 1995. Implementation of this action can begin 5 business days from the close of the 45 day appeal filing period.

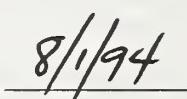
An appeal of this decision would evoke a stay of implementation of the Selected Alternative until fifteen days after the appeal decision.

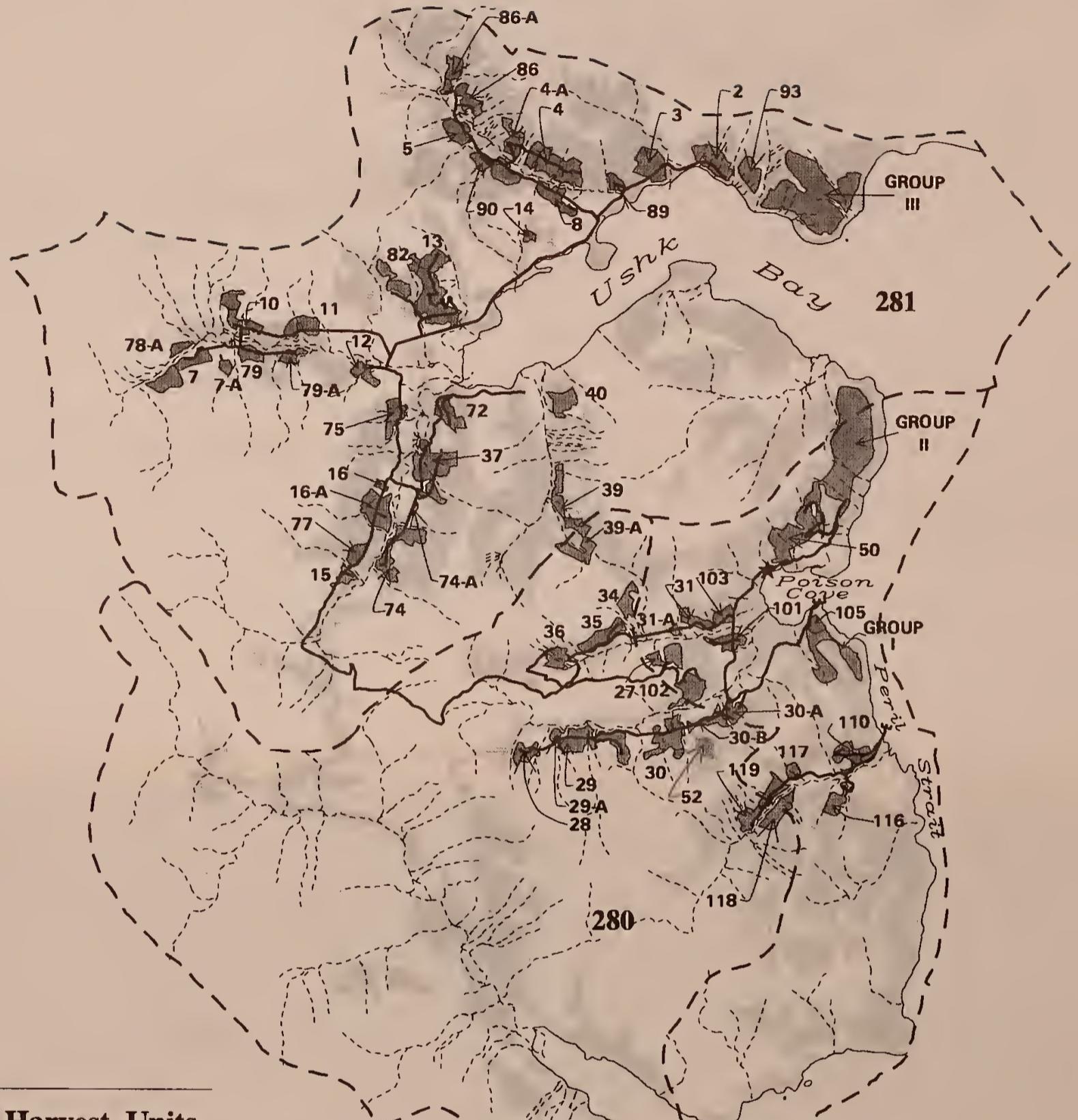
#### Contact Person

For additional information concerning the specific activities authorized with this decision contact the Ushk Bay Planning team:

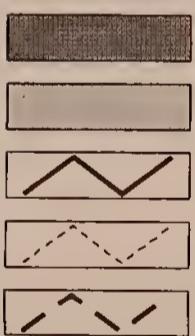
Michael J. Weber  
Ushk Bay Planning Team  
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204 Siginaka Way  
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(907) 747-6671

  
\_\_\_\_\_  
GARY A. MORRISON  
Forest Supervisor, Chatham Area

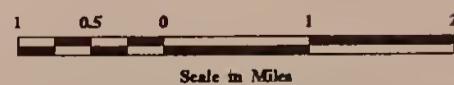
  
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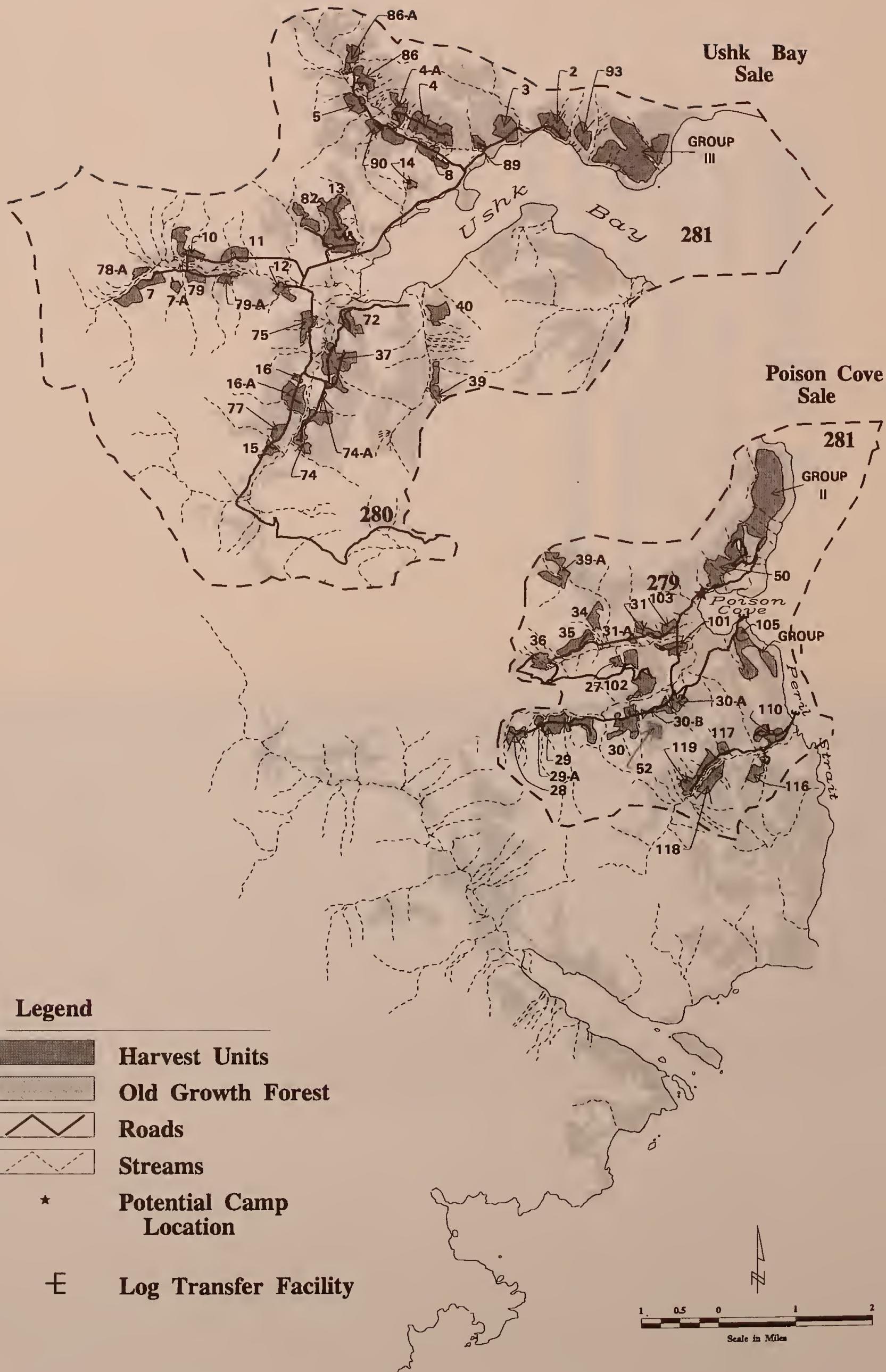
#### Legend



- Harvest Units**
- Old Growth Forest**
- Roads**
- Streams**
- VCU Boundaries**
- Potential Camp Location**
- Log Transfer Facility**









# **Appendix 1**

## **Harvest Units Specific to the Selected Alternative; Post-harvest Silvicultural Treatments; Enhancement Opportunities**



Table 1-1A

**Poison Cove Selected Alternative Volumes**

VCU	Harvest Unit	Live Skyline	Highlead	Helicopter	Running Skyline	Slackline	Shovel	Total Acres	Total Volume (MBF)
279	27	32.10						32.10	813
	30A				2.50	17.80		20.30	683
	31				9.30	12.40		21.70	612
	31A				5.30			5.30	118
	50				4.40	81.10		85.50	3157
	101						27.10	27.10	1024
	102	18.10		6.00		16.10		40.20	1482
	103				17.80			17.80	537
	105				9.10	2.20		11.30	382
	110		30.40		13.00			43.40	1119
	116		24.90					24.90	378
	117		10.40					10.40	301
	Gr 1			16.00				16.0*	500
	Gr 2			53.00				53.0*	1417
279	Totals	50.20	65.70	75.00	61.40	129.60	27.10	409.00	12523
280	28	24.00						24.00	591
	29		1170		40.80	22.10		74.60	2347
	29A				7.40			7.40	247
	30	8.90	5.90	20.50	3.70	20.70		59.70	1456
	30B				19.40			19.40	473
	34			22.70				22.70	620
	35				29.40	10.10		39.50	1424
	36	23.30						23.30	708
	52			19.90				19.90	480
	118					34.50		34.50	1337
	119					48.30		48.30	1524
280	Totals	56.20	17.60	63.10	100.70	135.70		373.30	11207
281	39A			47.00				47.00	2044
281	Totals			47.00				47.00	2044
Poison Cove Unit Totals		106.40	84.30	185.10	162.10	265.30	27.10	829.30	25774
Inter-unit ROW								65.40	1635
Poison Cove Selected Alternative Totals								894.70	27409
* Actual Harvest Acres									
Note: Volumes are Net Sawlog plus Utility									
Source: Smith, 1994									

Table 1-1B

**Ushk Bay Selected Alternative Volumes**

VCU	Harvest Unit	Live Skyline	Highlead	Helicopter	Running Skyline	Slackline	Shovel	Total Acres	Total Volume (MBF)
281	2	9.5			40.2			49.7	1474
	3					43	7.8	50.8	1733
	4	8.5			37.6	39.9		86	4090
	4A		10.8	12.3				23.1	1099
	5				29.3			29.3	604
	7	23.8		32.3				56.1	1172
	7A				9.5			9.5	141
	8				27.3		2.2	29.5*	794
	10			23.1	21			44.1	1211
	11	20.8			6.9		4	31.7	1090
	12	22.1						22.1	721
	13	46.7	9.7	13.1	36	15.6		121.1	3553
	14			7				7	73
	15				5.3		10.3	15.6	594
	16					5.6		5.6	118
	16A				8.3	30.8	14.9	54	2297
	37	63.4			7.3		15.1	85.8	2503
	39			31.2				31.2	1362
	40			31.6				31.6	881
	72	3.5			9.9	20.4		33.8	1422
	74	33.9					22.9	56.8	1318
	74A	2.1						2.1	44
	75	30.5						30.5	912
	77	16.8						16.8	683
	78A		11.1					11.1	431
	79				8.1		12.1	20.2	720
	79A				14.8			14.8	571
	82			12.8	16.2			29	1031
	86				21			21	905
	86A			20.6	5		1.3	26.9	672
	89				12.6			12.6	581
	90				42.6			42.6*	1406
	93				14.7	17.1		31.8	460
	Gr 3			38				38.0*	1137
Ushk Bay Unit Totals		281.6	31.6	222	373.6	172.4	90.6	1171.8	37803
Inter-unit ROW								99.6	1992
Ushk Bay Selected Alternative Totals								1271.4	39795

\* Actual Harvest Acres

Note: Volumes are Net Sawlog plus Utility

Source: Smith, 1994



## Post-Harvest Silvicultural Treatments

Post harvest silvicultural treatments that will occur in the Ushk Bay Project Area after timber harvest include hand planting and precommercial thinning of proposed harvest units. Table 1-2 displays a list of Selected Alternative units that may be hand planted. Actual planting acres will be determined by regeneration survey results and will likely include parts of units rather than entire units. Alaska yellow cedar and Sitka spruce will be planted in order to maintain current species composition and wildlife habitat diversity, and to meet NFMA requirements for adequate stocking.

Table 1-2

### Selected Alternative - Potential Hand Planting

VCU	Total Acres	Species to Plant	Harvest Units
281	50	Alaska cedar	2
	100		7, 10
	30		8
	54	Sitka spruce	11, 12
	78		39, 39A
	50		72, 77
<b>Total</b>	<b>266</b>		

Source: Smith, 1994

Precommercial thinning to improve stand vigor and timber production is proposed for the Selected Alternative units in Table 1-3. These units will be evaluated for thinning needs 10 to 12 years following harvest.

Table 1-3

**Selected Alternative - Potential Precommercial Thinning**

VCU	Total Acres	Harvest Units
279	43	30A, 31A, 103
	54	110, 117
280	27	29A, 52
	83	118, 119
281	113	2, 3, 89
	78	11, 78A, 79, 79A
	78	39, 39A
	50	72, 77
<b>Total</b>	<b>528</b>	

Source: Smith, 1994

# **Appendix 2**

## **Unit Cards Not Included in the Final EIS**



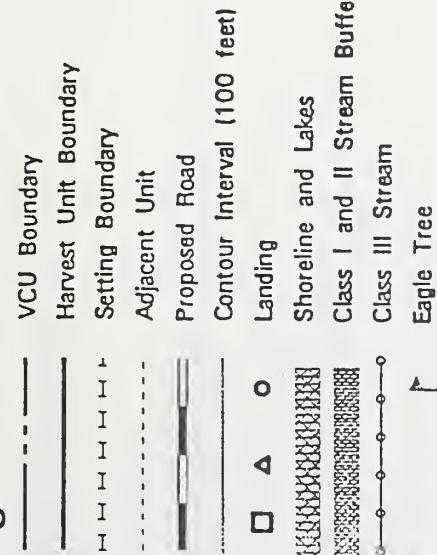
# Harvest Unit Design Card Ushk Bay EIS

Harvest Unit: 4  
VCU: 281  
Alternative(s): ROD

## Photo Information

Year 1986  
Flight Line 25  
Photo Number 118-119

## Legend



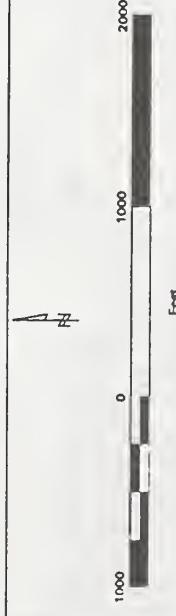
Logging System  
RS Running Skyline  
SL Slackline  
SSL Small Slackline  
H Highhead

HE Helicopter  
SV Shovel  
GR Gravity return

IDT Review

A setting is dropped from FEIS Unit 4 for hydrology and fisheries concerns.

M.J. Webster



## UNII DESIGN UNIT

PROJECT: 11SH

MANAGEMENT AREA:

LUD: VCU; 281 UNIT: 4 ACRES: 86

## RESOURCE CONCERN(S) INCLUDING MGT. OBJECTIVES &amp; MITIGATION

RESOURCE (Name/Date)	TIMBER/SILVICULTURE	Tree Type	X 44	X 45	H 44	S 46	TOT/AVG
	Acres						
	MBF/Bspecies						
Stand Exam: 6/25/92 T. Purva, S. ALEX	WH						
Stand Exam Type: PLOTS	BB						
Silvicultural Review: A. Smith	YC						
7/25/92	HH						
Damages found, disease, animal, etc.) Item # listed from stand review	Other						
	TOTAL						
	MBF/Bspecies						
Prevalent	Plant Assoc.	110	210	210	363		
Site Index							
Regen Method							
Gross Growth							
N. Growth							
Wind Hazard (H.M.L.)							

## LOGGING/TRANSPORTATION

Landing: 4-1, 11-2, 1-3, 4-3  
Profiles: 7-11-92  
Field Review: 7-11-92

## WATERSHED/FISHERIES

Field Review: GSR/Gov  
6-29-92 DMS

## SOILS/GEOLGY

Field Review: 6-1-92

## WILDLIFE/SUBSISTENCE

Field Review: VLA 7/20/92

## VISUAL/RECREATION

VAC:

Visibility:

ROC:

Recreation Site:  
Trail:

## ARCHEOLOGICAL/CULTURAL

Field Review: N/A

REGULAMENED SYSTEM IS CLEAR CUT. NATURAL REGEN. OF HEMLOCK SHOULD BE ADEQUATE. CONSIDER PLANTING UNIT w/ LCE/STK TO MAIN TRIN CURRENT SPECIES COMPOSITION. PLANTING SITE AREA OF S. SPRUCE AND CEDAR. IF NECESSARY, A. PINE. COMM SPECIAL MAY BE NECESSARY. IF RECOMMENDED THE PRE-THINNING AT 15-20 yrs. IS RECOMMENDED. THE PRE-DOMINANT PLANT ASSOC. IS WH-YC/BB, WHICH IS MORE PRODUCTIVE. IF POSSIBLE, LEAVE 2 STKES/AC. FOR DIVERSITY. STEEP PITCHES AND V. PROCHES OCCUR. DIRECTIONAL FALL TREST AWAY FROM V. PROCHES.

Stock line Should provide adequate S" span from top of hill for uphill yarding and running stock line down hill by yarding. Existing may be required for uphill yarding. Existing bowl may be altered where terrain slopes.

Round up windbreaks on areas to stabilize soil or areas where debris may be left. SUGGEST WINDSCREENS ON HILLSIDE AREAS. SPUR RAKING OVER V-ABORTIONS IN PART 2. To reduce potential increased erosion in steep incised channels long way from channel (prevented debris & timber from falling into channel). Windbreaks in valley floor which are important for base flow in stream systems.

Avoid surfaces > 55% while leveling. JETTY'S, JETTY'S, JETTY'S. Avoid surfaces > 65%. Avoid & protect vegetation to windbreaks. Avoid & protect vegetation to windbreaks. USE DUSTING (DUSTING) ON TREES SURFACE. THE DUSTING WILL HARVEST OF SOUTHERN PORTION OF UNIT (PARTICULARLY ALONG CREEK) WILL RESULT IN LOSS OF HIGH QUALITY HABITAT FOR MARTEN, OTHER BROWN BEAR. HARVESTING ENTIRE UNIT WILL IMPACT HIGH QUALITY HABITAT FOR DEER WINTER RANGE, AND WILL RESULT IN AGUMENTATION OF REMAINING WINTER RANGE.

WILDS NOT MEET VDO on pos. INVISIBLE FROM SMALL BOATS ON WHIRLEY MAY BE

Outside designated high sensitivity area - no survey necessary

E.C. 100%

E.C.

# Harvest Unit Design Card Ushk Bay EIS

Harvest Unit: 4-A  
VCU: 281

Alternative(s): ROD

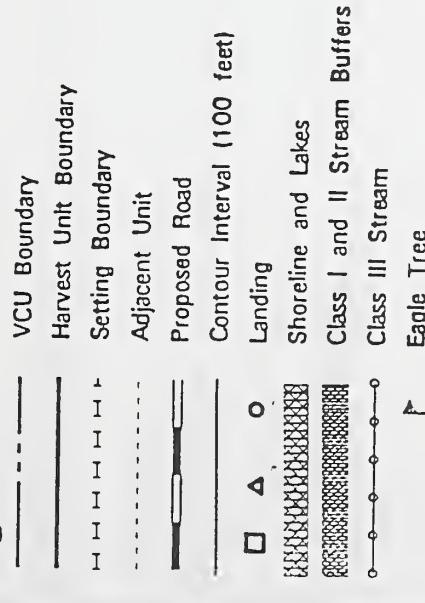
## Photo Information

Year 1986

Flight Line 25

Photo Number 118-119

## Legend



## Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

## IDT Review

Unit 4A is the western most setting of FEIS  
Unit 4. This unit is the result of dropping a  
setting for hydrology and fisheries concerns.

M.J. Lieber



## UNIVERSITY UNIT

## MANAGEMENT AREA:

PROJECT: HSHP LUD: VCU: 281 UNIT: 4A ACRES: 23

## RESOURCE (Name/Date)

## TIMBER/SILVICULTURE

Stand Exam: 6/25/92

T. Park, S. Allen  
Stand PLOTS:Stand Exam Type:  
A. Annual

7/25/92

Silvicultural Review:

Field Review: 7/11/92

Soil/Geology:

Landing: 4-1-2, A-3, 4-3

Profiles:

Field Review: 7/11/92

## LOGGING/TRANSPORTATION

## WATERSHED/FISHERIES

Field Review: GSR/GWW

6-29-92 DMS

## SOILS/GEOLOGY

DSD Field Review:

OSW &amp; FPL 6/1/92.

## WILDLIFE/SUBSISTENCE

Field Review: VLA 7/20/92

## VISUAL/RECREATION

VAC:

Visibility:

ROC:

Recreation Site:

Trails:

## ARCHEOLOGICAL

CULTURAL

Field Review: N/A

## RESOURCE CONCERN'S (INCLUDING MGT. OBJECTIVES &amp; MITIGATION)

Timber Type	X	44	X	45	X	44	S	46	TOTAVA
Acres									RECOMMENDED SYSTEM IS CLIFF CUT. NATURAL REGEN. OF HEMLOCK SHOULD BE ADEQUATE. CONSIDER PLANTING UPTILT OF RECEDING PLANTING / SITE ACT.
MBF Species									MAINTAIN CURRENT SPECIES COMPOSITION. PLANTING OF S. SPECIES ALONG MAIN CREEKS FOR ADDITIONAL RETENTION MAY BE NECESSARY. IF NECESSARY, A PART-COMMON SPECIES THINNING AT 15-20 TRES. IS RECOMMENDED. THIS PES. DOMINANT PLANT ASSOC. IS WITH YC/3B, WHICH IS MORE GREATLY PRODUCTIVE. IF POSSIBLE, CREATE 2 SITES / AC. FOR DIVERSITY. STEEP PITCHES AND V. NOOKS OCCUR. DIRECTIONALLY FALL TREES AWAY FROM V. NOOKS.
WH									
BB									
YC									
NH									
Other									
TOTAL									
DBF/ac									
Prevent. Plant Assoc.	110	210	210	363					
Bio Index									
Hagen Method									
Gross Growth									
N. Growth									
Wind Hazard (H, M, L)	H								

Damages (insect, disease, animal, etc.) from Flushed Cedar Stumps	Stockline	Should provide adequate soil protection for up hill yarding and running. Skewline for down hill yarding. Existing terrain may be required where terrain slopes change. Design boundary is altered where terrain slopes provide min/max or windbreak buffer on flats and streamside.
Landing:		
Profiles:		
Field Review:	Y	7-11-92
Watershed III		
Consider number of areas.		
Field Review:		
SOILS/GEOLOGY		
DSI/DO Field Review:		
OSW & FPL 6/1/92.		
Wildlife/Subsistence		
Field Review:		
VAC:		PARTIAL RETENTION
Visibility:		LOW
ROC:		MID-TO-HIGH
Recreation Site:		PRIMITIVE / LEARN/PLAY
Trails:		
Outside Survey		DESIGNATED HIGH-SENSITIVITY AREA - NO SURVEY NECESSARY

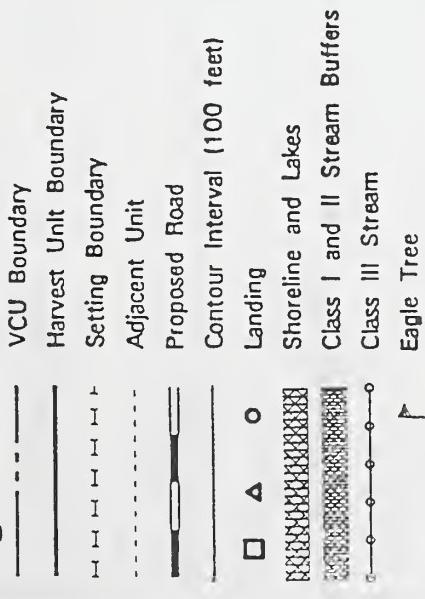
# Harvest Unit Design Card Ushk Bay EIS

Harvest Unit: 8  
VCU: 281  
Alternative(s): ROD

## Photo Information

Year 1986  
Flight Line 22  
Photo Number 163-164

### Legend

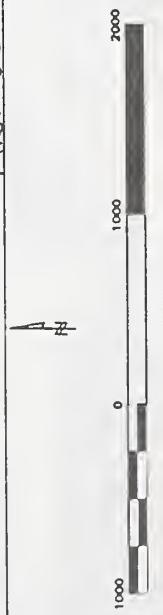


### Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

### IDT Review

The western most setting of FEIS Unit 8 is dropped as further assurance that the area between Units 8 and 90 and the stream buffer will remain windfirm. Crosshatched area below the road will be feathered (30% of timber removed) to increase windfirmness of remaining trees.





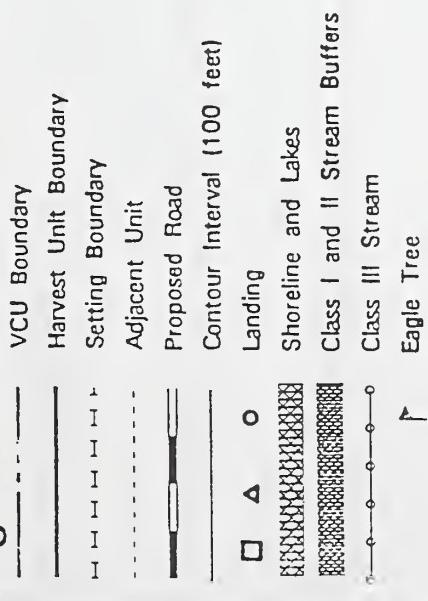
# Harvest Unit Design Card Ushk Bay EIS

Harvest Unit: 11  
VCU: 281  
Alternatives(s): ROD

## Photo Information

Year: 1986  
Flight Line: 24  
Photo Number: 130-131

### Legend



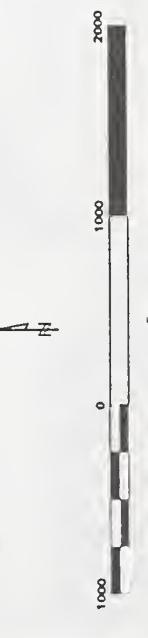
### Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

### IDT Review

The short spur road and corner are deleted from the southeastern portion of FEIS Unit 11 as further assurance that the stream buffer will be windfirm.

M.J. Weber



## UNIT VEGOIN VANN

PROJECT: USHK	MANAGEMENT AREA:	ACRES: 32	ACRES: 11	UNIT: 28	UNIT: 11	RESOURCE CONCERNs (INCLUDING MGT. OBJECTIVES & MITIGATION)
RESOURCE (Name/Dates)	TIMBER/SILVICULTURE					
Stand Exam: 6/9/92 M. White/F. Pusino Stand Exam Type: Variable Plot; Fixed Plots Silviculturalist Review: J. Smith 7/25/92	Tree Type Acres MBF Species WH 88 YC MH Other TOTAL DBH/Ac Provenant Plant Assoc. Bio Index Regen Method Grose Growth N. Growth Wind Hazard (H.M.) Damage (insect, disease, animal, etc.)	xx45 xx44 120				Recommended clear cut system. Natural regen of hemlock should be adequate. Planting of YC may be necessary. A PCT may be necessary to enhance growth in ~15-20 yrs. Unit predominantly wet/BBS/SF site productivity is high.
LOGGING/TRANSPORTATION	Landing: 11-1-92 Profile: 11-1-92, 11-2-277 Field Review: DPA 6/10/92					Mostly downhill logging. Some moderately severe fall/will. Directionally fall/yard away from stream buffers. Snow retention is a safety issue.
WATERSHED/FISHERIES	Log away from V-notch drainages and consider hill long suspension analysis. Prevent damage from entering drainages and if do, remove it. minimize disturbance to watersheds. Stream should be 100 feet wide and wide firm. min width 100' buffer from class I streams.					
SOILS/GEOLOGY	Avoid slopes over 70%. Avoid windbreak stands. Avoid cutting across suspension bridges along the valley bottom.					& PROTECT V-NOTCHES AND SLIDE CUTS TO REACH THE TOPS OF FAILURES. USE PARTIAL USE VALLEY BOTTOM.
WILDLIFE/SUBSTINENCE	OSW & RPL 6/1 92 Field Review: VLA 7/20/92					Harvest of eastern half of unit will result in loss of high quality habitat for marten, otter, brown bear. Harvesting most of unit will impact moderate and high quality deer winter range.
VISUAL/RECREATION	VQA: Perspective Photo: Field Review: VLA 7/20/92	PR Low Mg Primitve / Park-Boy				Views not meet prqs. May be seen by visitors on snow boats in VSA RPK.
ARCHEOLOGICAL CULTURAL	Field Review: 7-15-92	Recreation-Place Troll:				1/10 significant cultural resources found

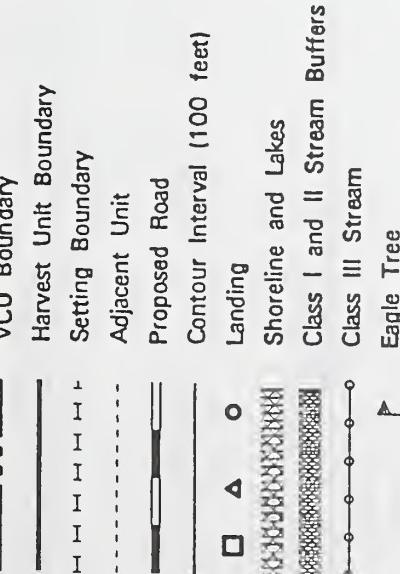
# Harvest Unit Design Card Ushk Bay EIS

Harvest Unit: 12  
VCU: 281  
Alternative(s): ROD

## Photo Information

Year 1986  
Flight Line 23  
Photo Number 14-15

## Legend



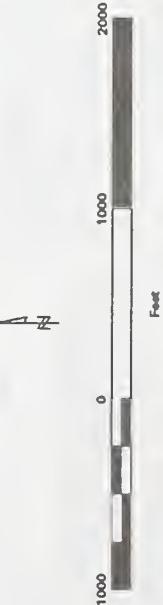
## Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

## IDT Review

The western boundary of FEIS Unit 12 is drawn back as further assurance that the boundary will be windfirm and for soils and hydrology concerns with the recent slide to the west of the unit.

*M.J. Weber*



# UNIT DESIGN CARD

**PROJECT:** USAR      **MANAGEMENT AREA:** LUD:      **UNIT:** 12      **ACRES:** 2.2

## RESOURCE (Name/Date)

### TIMBER/SILVICULTURE

Stand Exam: 6/11/92  
S. Allen / K. Seitz

Stand Exam Type:  
plots

Silvicultural Review:  
L. Smith

7/25/92

### LOGGING/TRANSPORTATION

Landing: 12-1, 12-2, 12-3

Profiles:

Field Review: 6/22/92

WATERSHED/FISHERIES

On-Ground 7-6-92

Field Review: 00~ 8/2/92

### SITES/GEOLOGY

Field Review:

OSW & FRC 6/6/92

### WILDLIFE/SUBSISTENCE

Field Review: 7/20/92

### VISUAL/RECREATION

Perspective Plot:

Field Review: 6/24 7-24 AC

### ARCHEOLOGICAL CULTURAL

Field Review: 7-18-92

## RESOURCE CONCERNs (INCLUDING MGT. OBJECTIVES & MITIGATION)

	Type	X 45	X 44	TOTIAW
Acres				
MBF Species				
WH				
BS				
YC				
MH				
Other				
<b>TOTAL</b>				
MBF/ac				
Provenant	120			
Plant Assoc.				
Bio Index				
Fagen Method				
Gross Growth				
N. Goshawk				
Wind Hazard (H.M.L) H				
Disease (Insect, disease, animal, etc.) Bloated wood				

Recommended cutting system is clearcut. Natural regeneration of hemlock should be adequate. A pre-commercial thin at 15-20 years will probably be necessary for growth enhancement.	predominant plant association is WH/BBL/SF, which is highly productive. Unit is defined by steep notches which form a V. Consider with geological about possible initiation of upper portion (carve) adjacent to notch. Steep slopes, shallow valley soils and prevailing winds should be noted. Old below down extended.

Stay away from 2 main draws - Don't impact slopes over 65% <del>Stay</del> Sing reiterations as a safety issue. See revised boundary	105' away from V-notches drawlines and consider full long suspension prevent debris from entering drawlines and if it does remove from drawline to 100'. But they from streams should be 100 feet and no more than 100' buffer for class I streams. Recommend SO. Buffer on all slopes to streams posing siltation problems, but only if within 100'

Would not meet pos - Many bee seen by boats on lake today.

PR	Low
VAC:	
VISIBILITY:	
ROC:	
Recreation Site:	

Trail:	

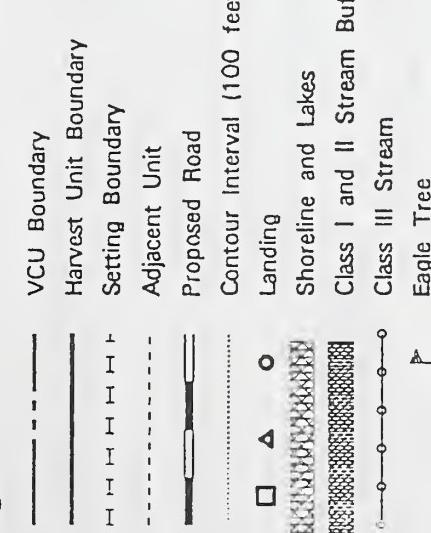
# Harvest Unit Design Card Ushk Bay EIS

Harvest Unit: 27  
VCU: 279  
Alternative(s): ROD

## Photo Information

Year 1986  
Flight Line 26  
Photo Number 12

### Legend



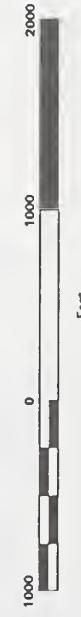
### Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

### IDT Review

Northern boundary of FEIS Unit 27  
is adjusted for fisheries concerns.

M.J. Weber





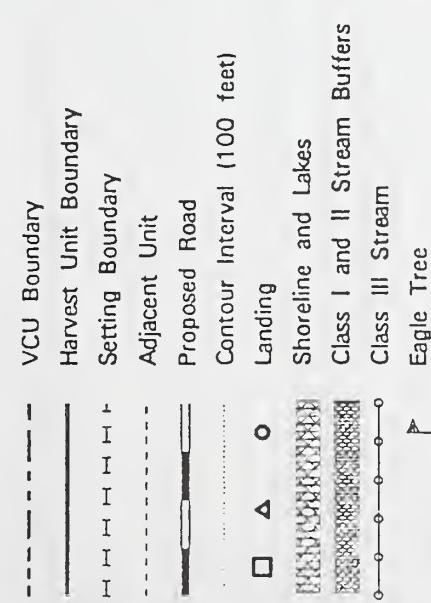
# Harvest Unit Design Card Ushk Bay EIS

Harvest Unit: 28  
VCU: 280  
Alternative(s): ROD

## Photo Information

Year 1986  
Flight Line 25  
Photo Number 109-110

### Legend



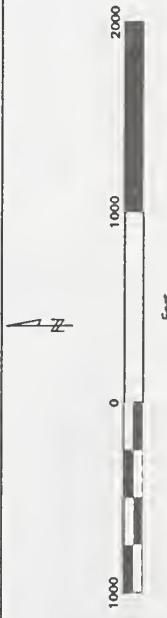
### Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highhead		

## IDT Review

"Finger" in NW of FEIS Unit 28 is dropped  
for fisheries concerns.

M.J. Weber



# UNIT DESIGN CARD

PROJECT: USHK

MANAGEMENT AREA:

LUD: VCU: 280 UNIT: 28 ACRES: 24

## RESOURCE (Name/Dates)

### TIMBER/SILVICULTURE

Name	Type	Acre	Total
Stand Exam: M. COX 7/1/92 K. SEITE M. WHITE	Acres	39	
Stand Exam Type: VARIABLE PLOT; Fixed Plots	MBF/species		
Silvicultural Review: J. Smith 7/25/92	WH	88	
	YC		
	MH		
	Other		
	<b>TOTAL</b>		
	DBF/Ac		
	Prevalent Plant Assoc.	210	
	Ble Index		
	Reopen Method		
	Gross Growth		
	H. Goshawk	None	
	Odyssey EEP		
	Wind Hazard (H.M.)		

L

## LOGGING/TRANSPORTATION

Landing: 25-1-59-1

Profiles: 25-1-59-1

Field Review: 7/1/92

## WATERSHED STATEMENT

7/4/92 C-12

Field Review:

## SOILS/GEOLGY

7/6/92

Field Review:

## WILDLIFE/SUBSTENCE

7/17-92

Field Review:

## ARCHEOLOGICAL

CULTURAL

Field Review: N/A

## RESOURCE CONCERNs (INCLUDING MGT. OBJECTIVES & MITIGATION)

RECOMMEND CLEAR-CUT. NATURAL REGENERATION OF HEMLOCK SHOULD BE ADEQUATE. PLANTING OF YELLOW CEDAR MAY BE NECESSARY TO MAINTAIN SPECIES COMPOSITION.  
WAVES/BB PLANT ASSOC. ALSO MC/BB AND MH/BB/SC ARE FREQUENT. SITE PRODUCTIVITY IS MODERATE. HELICOPTER LOGGING MAY BE NECESSARY DUE TO MANY SHALLOW, BOGGY RAVINES.

Timber Type	Acres	Total
WH	39	
BB		
YC		
MH		
Other		
<b>TOTAL</b>		
DBF/Ac		
Prevalent Plant Assoc.	210	
Ble Index		
Reopen Method		
Gross Growth		
H. Goshawk	None	
Odyssey EEP		
Wind Hazard (H.M.)		

Damage (wind, disease, animal, etc.) SAME FLUMBS & DEAD TOPS  
Sloping position has anchors for 1/6 in. bales w/ 1/4 in. Helicopter activity where no lift exists for sky lift, no 24-1 directionality fall about first V-notches. Split landing ability from V-notches generally not feasible. Safety is critical.

Sloping position has anchors for 1/6 in. bales w/ 1/4 in. Helicopter activity where no lift exists for sky lift, no 24-1 directionality fall about first V-notches. Split landing ability from V-notches generally not feasible. Safety is critical.

Class 1/1 along western boundary, Class 11/11 in eastern area of unit. Maintenance 100 ft. buffer for class 11 streams & 50 ft. buffer or up to slope break. V-notches. Split landing recommended for dir v-notch cut Log away from V-notch channel and consider fallen posted suspension log off bank from entering channels and if it does get in, remove it.

Avoid slopes over 60% due to free falling dissections and failures. Protect v-notches, slumps, and cuttings to wind farm stands. Avoid cutting across the heads and below the toes of unstable ground. Avoid cutting areas near shoulders of the ravines on the E & W boundaries. Use minimal logs suspension hanging at the least on the hillside. No concerns for brown bear, marten, river otter, or deer.

Landfill site / modification low / interz. May not meet pos. may be visible from aircraft in middle ground drainage zones.

Outside Sensitive Area - No Survey Necessary

## VISUAL/RECREATION

### Perspective Plots:

### VAC:

### Visibility:

### ROC:

### Recreation Site:

### Trell:

## ARCHEOLOGICAL

### CULTURAL

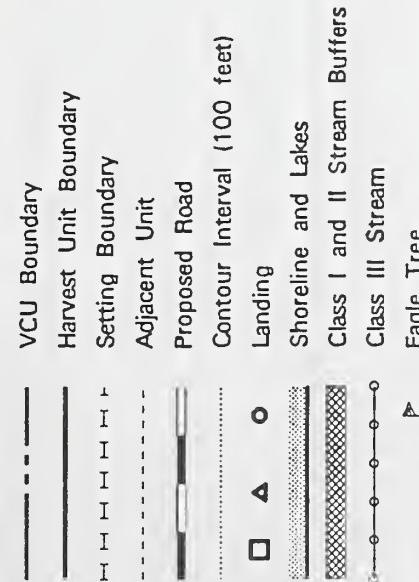
# Harvest Unit Design Card Ushk Bay EIS

Harvest Unit: 29  
VCU: 280  
Alternative(s): ROD

## Photo Information

Year: 1986  
Flight Line: 25  
Photo Number: 109-110

## Legend



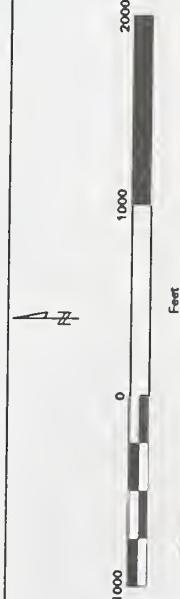
## Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

## IDT Review

North central boundary of FEIS Unit 29 is adjusted for fisheries concerns.

M.J. Weber



## UNIT DESIGN CARD

PROJECT:	USFS MANAGEMENT AREA:	VCU: 280	ACRES: 75
<b>RESOURCE CONCERNs (INCLUDING MGT. OBJECTIVES &amp; MITIGATION)</b>			
<b>TIMBER/SILVICULTURE</b>	Type	H4Y	Y4S
Stand Exam Date:	7/7/92	45	
Stand Exam Type:	Variable plot; Fixed Plots		
Silviculturalist Review:	D. Smith 7/20/92		
Acres	35		Recommend a clear-cut system. Natural regeneration of Hemlock should prove adequate. YC may need to be planted to maintain species composition.
MBF/Bpedee	88		Plant Assoc is WH-Y-BB on upper slopes and WH-BB on lower slopes. Stand productivity is moderate. A PCT may be necessary at ~ 15-20 yrs to enhance growth.
WH	YC		
MH			
Other			
<b>TOTAL</b>			
DBH/AC			
Prevalent	110.		
Plant Assoc.	Mb 210		
Site Index			
Regen Method			
Gross Growth			
N. Goshawk	None observed		
Wind Hazard (H,W,L) M			
Damages (seed, disease, animal, etc.)			
<b>LOGGING/TRANSPORTATION</b>			
Landing: 29-1, 29-2	Logging System: Skidder		
Profiles: 29-1-29-2	Landing (# of Settles): 2		
Field Review: 7/19/92	Class 1 or 2 Channel Number: 1		
	Class 3 Channels in Unit Y Number: 3		
			Log away from V-shaped channels, consider full or partial deflection. Split yarding at biggest concern in center.
			It's safe to do in rear of it. Class 3 stream along northern boundary, class 1 along east & west. Maintain 100ft buffer on class 1.
<b>WATERSHED/FISHERIES</b>			
Data/Review 7/6/92	Field Review: 7/4/92	Avoid scoops over 70%	Protect V-notches, slides, and critters to above the heads or below the base of features.
		Avoid cutting stands. Avoid cutting above the heads or below the base of features.	
		Avoid disturbing tree silvics of this ravines on the E & W boundaries of the unit.	
		Use partial log susps in harvesting north half of unit.	Harvesting north half of unit would result in loss of high quality habitat for brown bear, marten, otter, No concern for deer.
<b>SOILS/GEOLOGY</b>			
Field Review: PL & DSW 7/17 92	WIDDOFF/SUBSTINCE	Avoid scoops over 70%.	
		Avoid disturbing tree silvics of this ravines on the E & W boundaries of the unit.	
<b>VISUAL/RECREATION</b>			
VOC: Perspective Plots:	MODIFC. / P.P.	INF.	WOULD NOT MEET POS. MAY BE VISIBLE FROM AIRPORT IN MIDGROUND DISTANCE ZONES
VAC: Visibility:		MEG	
ROC: Recreation Site:		PPM. I	
<b>ARCHEOLOGICAL CULTURAL</b>			
Field Review: 7/20/92			possible high - sensitivity area - no survey, report

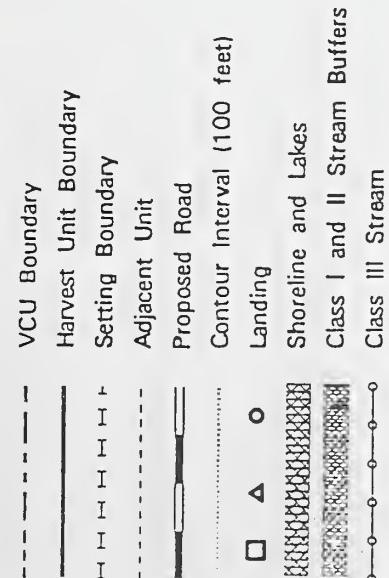
# Harvest Unit Design Card Ushk Bay EIS

Harvest Unit: 30  
VCU: 279  
Alternative(s): ROD

## Photo Information

Year 1986  
Flight Line 26  
Photo Number 13-14

### Legend



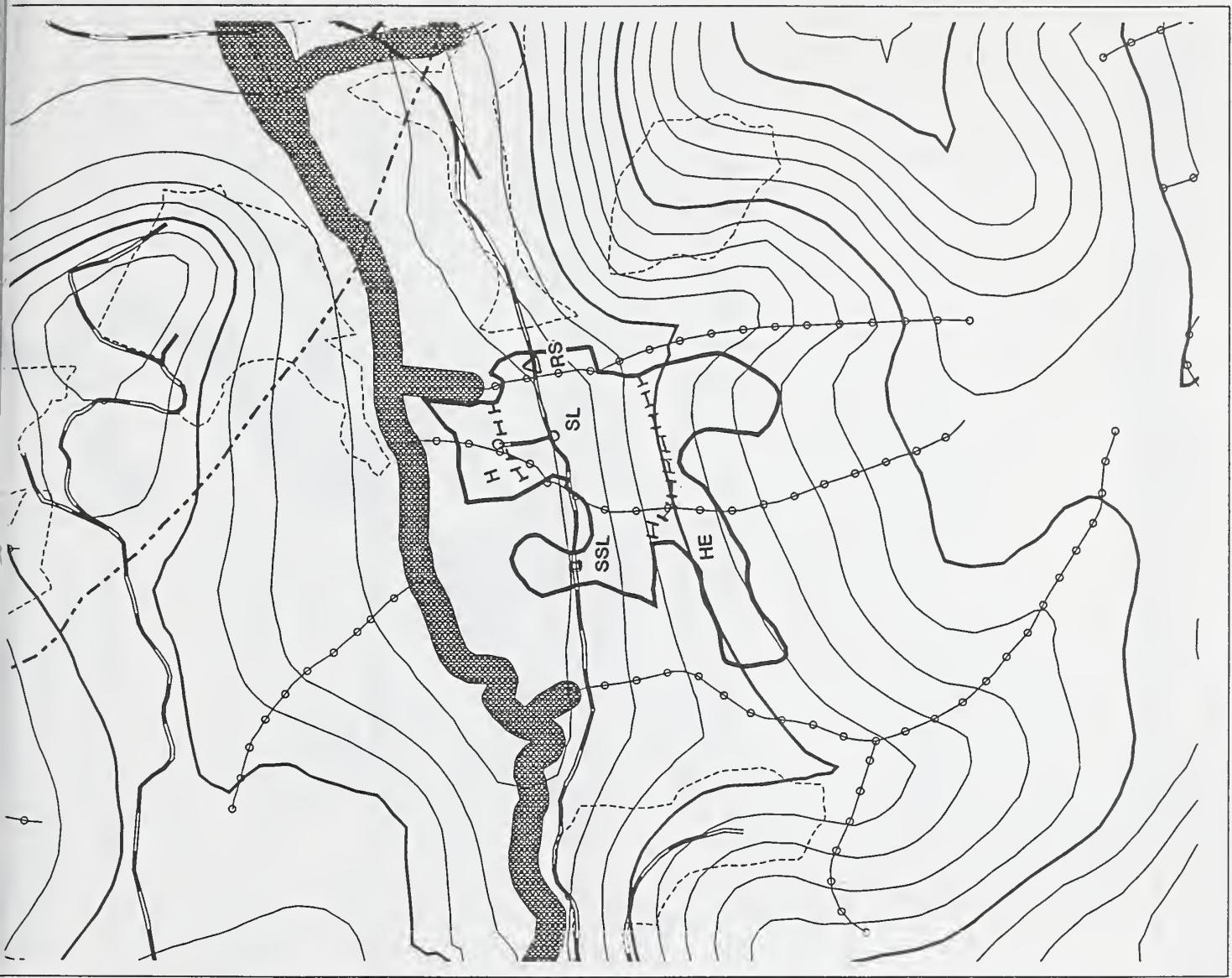
### Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

## IDT Review

An area in the center of FEIS Unit 30 is dropped for fisheries concerns. NW boundary of the unit is adjusted for the same reason.

M. J. Weber



**UNIT DESIGN CARD**

USSHX PROJECT

MANAGEMENT AREA

LUDI CUCULI

LAND: 30 ACRES  
UNIT: 30 CUI

UNIT: 30  
LUD  
VCU  
CBB  
EEGI  
60-

RESOURCE CONCERN'S (INCLUDING MGT. OBJECTIVES & MITIGATION)						
RESOURCE (Name/Date)		TIMBER/SILVICULTURE				
Type	Date	4-4-4	5-4-6	Total		
MBF/Species						
Acres	83	5				
WH						
BB						
YC						
MH						
Other						
TOTAL						
TMBF/Ac						
Plant Assoc.	210					
Ble Index						
Regen Method						
Gross Growth						
N. Qashawk	None	Observed				
Wind Hazard (H.M.L)						
Disease (insect, disease, animal, etc.)						

Singly retaining a safety issue. Directly fill out from

LOGGING/TRANSPORTATION

EQUUS 111

Landing: 30-1, 2, 3, 4; 5

Field Review: Sept. 7, 1972

WATERSHED FISHERIES

Field Review: /

DMS 7/6/92

SOILS/GEOLOGY

Field Review:

OSW 7/24 92

WILHELM/STURM

Field Review:

CLA 7/20/92

VISUAL/RECREATION

Perspective Plots:

Field Review: 11/16 2006

193 9/3

ARCHEOLOGICAL  
CULTURAL

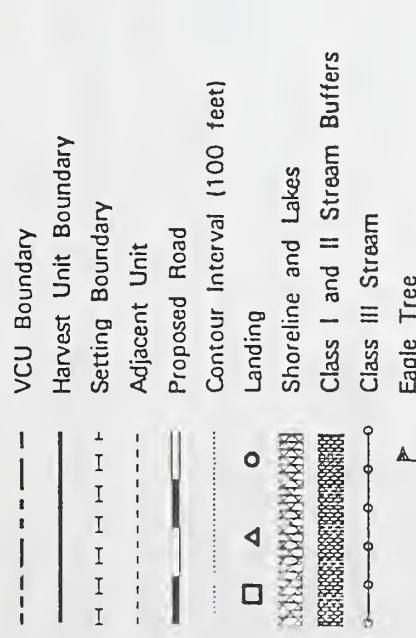
# Harvest Unit Design Card Ushk Bay EIS

Harvest Unit: 30A  
VCU: 279  
Alternative(s): ROD

## Photo Information

Year 1986  
Flight Line 26  
Photo Number 13-14

### Legend



Logging System	HE	Helicopter
RS	SV	Shovel
SL	GR	Gravity return
SSL		
H		

## IDT Review

NW boundary of FEIS Unit 30A is adjusted  
for fisheries concerns.

M.J. Lieber



PROJECT: MANAGEMENT AREA: USHK

LUD: VCU: UNIT: 30-A ACRES: .20

LUD: VCU UNIT: 30-A ACRES: .20

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MESSOURCE CONCERNING VINCENDA VITIOSE & VITIATIONE

TELEGRAMS/TRANSPORTATION

Landing: 30-1/2, 3, 4; 5  
Proloss: 30-2-5=0

THE BOSTONIAN

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Field Bowls

DRAFT // 107

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BOILS/GEOLOGY

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### **Field Review:**

053712492

WINDFIRE/SUBSTANCE

111

Field Review: / /

VLAK 720/12

SOMMERFEST

REVIEW ARTICLE

Paradigm Shifts:

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Field Review: 4/11/2016

13 | Page

ARCHEOLOGICAL

CULTURAL

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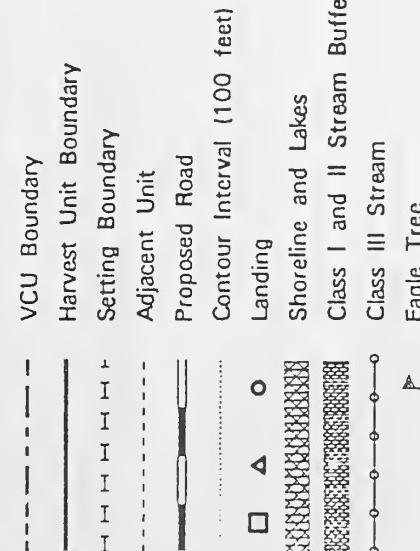
# Harvest Unit Design Card Ushk Bay EIS

Harvest Unit: 30B  
VCU: 279  
Alternative(s): ROD

## Photo Information

Year 1986  
Flight Line 26  
Photo Number 13-14

### Legend



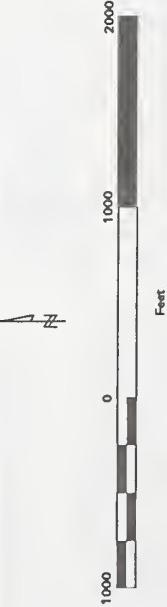
### Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

## IDT Review

Unit 30B is the eastern part of FEIS Unit 30. This unit is the result of dropping an area for fisheries concerns. NE boundary of unit 30B is likewise adjusted.

M.J. Weber





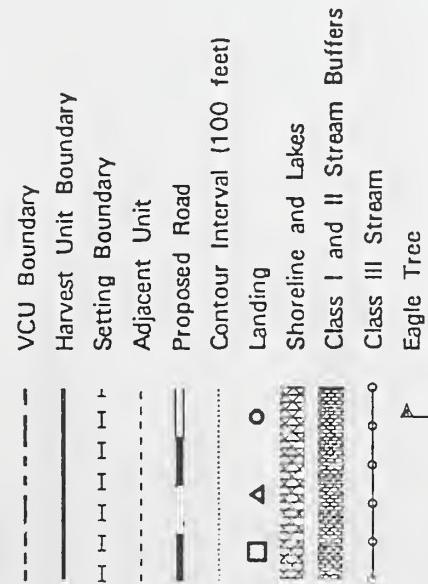
# Harvest Unit Design Card Ushk Bay EIS

Harvest Unit: 31  
VCU: 279  
Alternative(s): ROD

## Photo Information

Year 1986  
Flight Line 16  
Photo Number 11-12

### Legend



### Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

## IDT Review

South boundary of FEIS unit 31 is adjusted  
for fisheries concerns.

M.J. Lieber



# UNIT DESIGN CARD

PROJECT: USAK MANAGEMENT AREA: LUD: VCU: 279 UNIT: 31 ACRES: 2.2

## RESOURCE CONCERN (INCLUDING MGT. OBJECTIVES & MITIGATION)

### RESOURCE (Name/Date)

#### TIMBER/SILVICULTURE

Acres: 89

Stand Exam: T. Pusack, S. Kucher 7/11/92

Stand Exam Type: plots

Silvicultural Review:

*S. Smith*

7/25/92

Prevalent Plant Assoc.: Picea/P.

Blo Index: 310

Regen Method: Regen

Gross Growth: 10.28

H. Goshawk

Wind Hazard (H, M, L): M

Disease (need, disease, animal, etc.):

#### LOGGING/TRANSPORTATION

Landing: 31-1-31-2, 31-3

Profile: 31-1-358, 31-3-50

Field Review: D-26/7-14/92

#### WATERSHED/FISHERIES

6/26/92

Field Review: D-26/7-14/92

#### SOILS/GEOLOGY

Field Review: DSW & QLS 7/17/92

#### WILDLIFE/SUBSTINENCE

Field Review: VLA 7/20/92

#### VISUAL/RECREATION

VQO: Partial retention

VAC: Low

Visibility: Med

ROC: High

Recreation Site: Trail:

#### ARCHEOLOGICAL CULTURAL

Field Review: N. Kelly 7-15-92

RECOMMENDATIONS

RECOMMENDATION: F. HOMOCR. SHOWS SOME SUFFICIENT PLANTING OF SITKA SPRUCE + Y. COULD BE REGEN. MAY BE NECESSARY TO MAINTAIN CURRENT SPECIES COMPOSITION.

IF POSSIBLE, LEAVE TWO SNACKS/ACRE FOR AVOCARDO.

PART-COMMERCIATE THREE-NINE Acre 15-20 YES. IS POSITION

MENED TO ENHANCE/INCREASE CROWD. LONGER POSITION OF UNIT IS FAIRLY PRODUCTIVE ALTHOUGH THERE ARE ATTENES OF 200 ALONE. THE PREVAILENT PLANT ASSOCIATION IS

WH-YC/BS WHICH IS MODERATELY PRODUCTIVE.

UNIT BOUNDARY CHANGES:

UPPER PARTIAL OFF UNIT IS VERT STEEP (SLOPES 80%+) WITH V-SHOTCHES. THIS MAY

NOT CREATE SPROCE BOARDS TO BE COUNTER-EXP.

ADDITIONAL ~12 AC. ADDED IN SIN

UPPER BOUNDARY ALTERED W/INCLINE VERT STEEP

EXCEED 65% NO SPROCE W/INCLINE VERT STEEP

LOGGING THIS UNIT.

Two class 1 streams (South West) maintain 50 ft. or up to slope break buffer if windbreak.

RECOMMENDED SPOTTY HARVESTING. LOG CROSSES WHICH IS DISRUPTIVE TO STREAMS AND RIVER BANKS. CONSIDER FULL STREAM PROTECTION. MINIMUM DISTANCE FROM STREAMS SHOULD BE A MINIMUM OF 100 FT. AND BE USED FOR

CLASS 1 CHANNEL NUMBER: 2

CLASS 3 CHANNEL NUMBER: 3

AVOID SLOPES OVER 65%. MUD & SLIDE TOES OF UNSTABLE GROUND. USE PARTIAL LOG

STANDS. AVOID CUTTING BELOW SUSPENSION JUNCTIONS ON THE SLOPES AROUND THE STABLE BOTTOM.

Logging some portion of unit would result in loss of high quality habitat for brown bear, river otter. Logging northern half of unit will impact moderate quality deer winter range.

WOULD NOT MEET PRO. VISIBLE FROM FOREST COVER.

No significant cultural resources

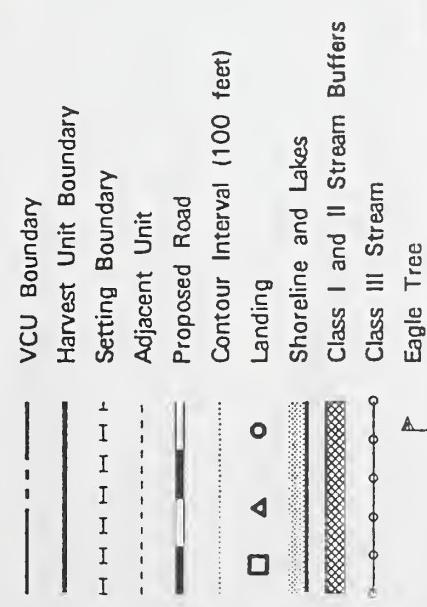
# Hariest Unit Design Card Ushk Bay EIS

Harvest Unit: 35  
VCU: 280  
Alternative(s): ROD

## Photo Information

Year: 1986  
Flight Line: 25  
Photo Number: 111

## Legend



## Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

## IDT Review

SE boundary of FEIS Unit 35 is adjusted  
for fisheries concerns.

M.J. Weber



# UNIT DESIGN CARD

PROJECT: USHK MANAGEMENT AREA:

ACRES: 40  
ACRES: 35  
LUD: VCU: 2,800  
UNIT: 35  
RESOURCE CONCERNs (INCLUDING MGT OBJECTIVES & MITIGATION)

RESOURCE (Name/Date)	Tim Type	X44		TOT/AVG	Cutting method recommended is clear-cut. Natural regeneration of hemlock should be adequate. Lop-and-spruce stand occurs as well as yellow cedar in areas - planting may be necessary to maintain current species composition. Thinning at 15-20 years recommended.
TIMBER/SILVICULTURE	Acres				
Bland Exam: 7/8/92 S. Allen / T. Pusina	MBF/Bponde				
Bland Exam Type: Plots	WH				
Silviculturalist Review: D. Smith	88				
	YC				
	MH				
	Other				
	TOTAL BFB/AC				
Prevalent Plant Assoc.	110				
Blo Index					
Regen Method					
Gross Growth					
Hazardous (H,M,L) N					
Damages (need, disease, animal, etc) HEMLOCK FLUTING					
LOGGING/TRANSPORTATION					No logging difficulties. Limit logging activity where terrain slopes exceed 65%.
	Logging System: Running skidline				
	Landing: 35-1 35-2 35-3				
	Profile: 35-1-352, 35-2-353				
	Field Review: 6/26/92 <i>DK</i>				
WATERSHED/FISHERIES	Field Review: 7/14/92				Class 1 or 2 Channel? Number _____ Landing # (# of Settling): 4
SOILS/GEOLOGY	PLS 2: 7/10/92				Class 3 Channels in Unit Y Number: Many
	PLS 3: 7/11/92				Avoid slopes over 65%. Avoid & stands. Avoid cutting beyond the W border. Use partial log suspension yarding. Assume the alluvium bottom.
WILDLIFE/SUBSISTENCE	DSQ 7/14/92				Field Review: VLA 7/20/92
VISUAL/RECREATION	VAC: VAC: VAC: Recreation Site: Trail:				PP / Modification Int'l. Louv. Mag. PRM. I
ARCHEOLOGICAL CULTURAL	Field Review: 7/14/92 7/20/92				Outside Sensitive Area - No Survey Necessary

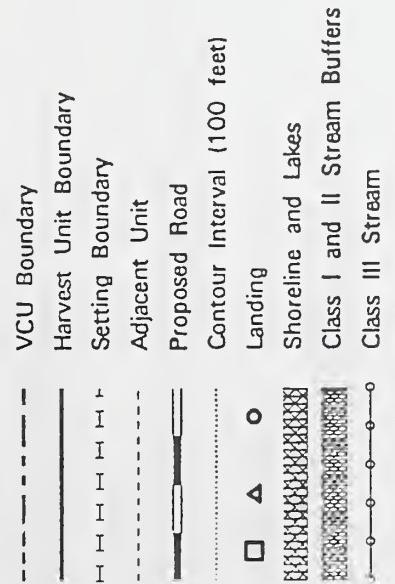
# Harvest Unit Design Card Ushk Bay EIS

Harvest Unit: 37  
VCU: 281  
Alternative(s): ROD

## Photo Information

Year 1986  
Flight Line 24  
Photo Number 134

### Legend



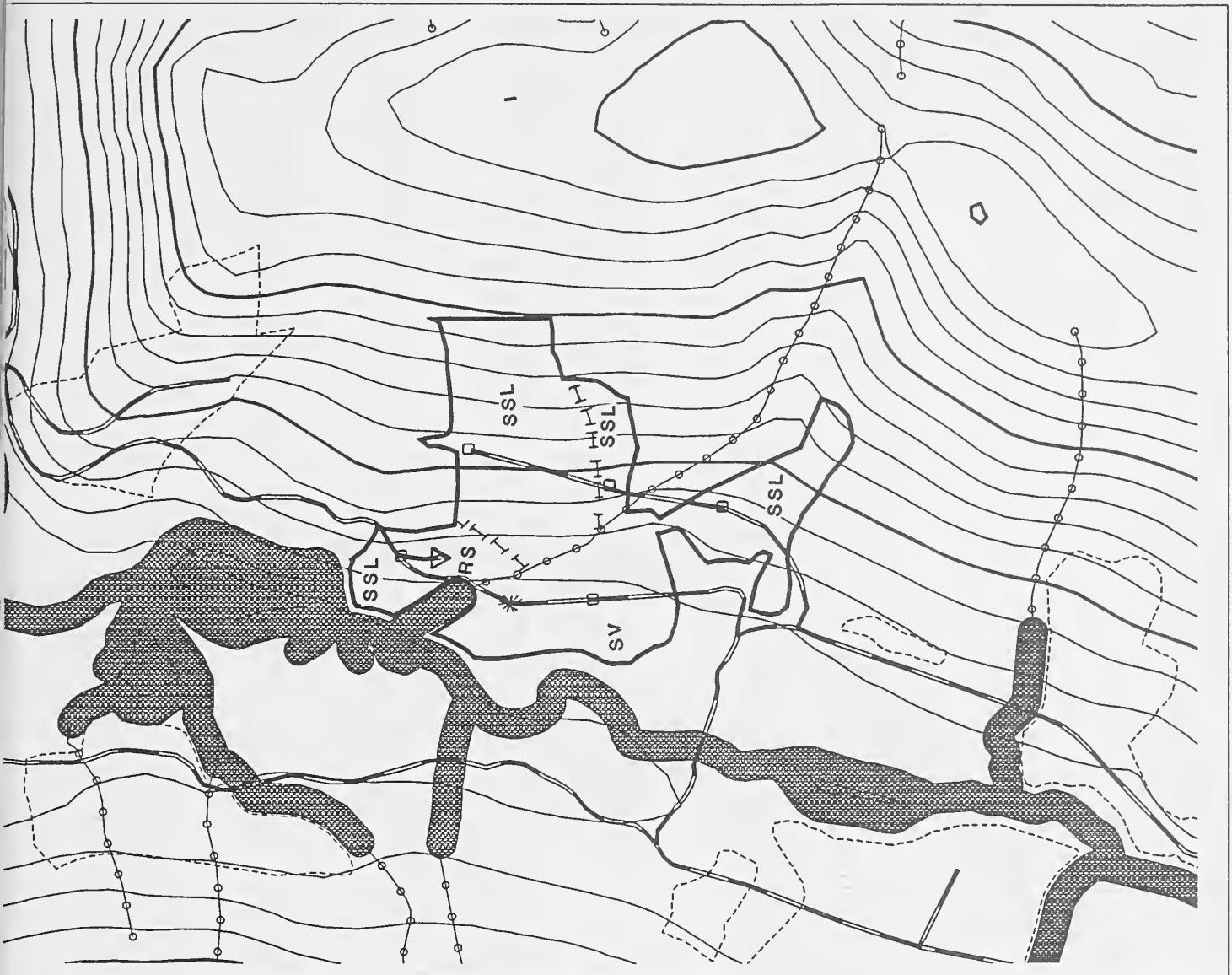
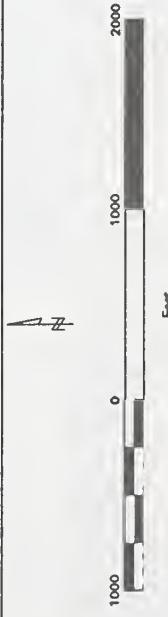
### Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

### IDT Review

The boundary of FEIS Unit 37 is adjusted along the Class I stream as further assurance of windfirmness.

M.J. Weber



# UNIT DESIGN CARD

PROJECT: USHK : MANAGEMENT AREA:

LUD: VCU: 28) UNIT: 37 ACRE: 86

## RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)

RESOURCE (Name/Date)	Blond Exm: D. Marx / S. Allen Blond Exam Type: plots Silvicultural Review: S. Smith 7/25/92	Tim Type Acres MBF Species	X45 X44	Total	Resource Concerns (including Mgt. Objectives & Mitigation)
TIMBERSILVICULTURE					<p>Recommended cutting system is clear-cut. Natural regeneration of hemlock should be adequate. Planting of larch spruce and yellow cedar is recommended if current species composition is desired. Spruce occurs in stands on the flats by the main creek and yellow cedar is through out X45. A pre-commercial thin in 15-20 yrs. is suggested.</p>
					<p>Planting predominately WHT/BBL/SF, a very productive site. X44 is LBC/CBB moderately productive and WHT-YC/BB moderately productive. V notches run throughout, and small bushes are within unit. A drainage line intersects the stand, delineating the stand types.</p>
					<p>String reservations as safety issues. NE boundary changed to conform to logical/grading boundaries. Directionality fall away from streams.</p>
LOGGING/TRANSPORTATION					<p>Log away from water courses &amp; consider fell a restricted expansion. Keep plot is sort of cleared and remove it if it does go in. Minimize disturbance in logging and riparian wetlands or maintain 100' buffer on stream boundary of unit. Remove and set on glass II stream if situations possess problems, however it would be better to close III stream if situations possess problems.</p>
Landing: 37-1, -2, -3, -4, -8, -9 Pollution:					
WATERSHED/FISHERIES					<p>DWB/DSW 7/8/92 Field Review: OBN 8/13/92</p>
SOILS/GEOLOGY					<p>Avoid slopes over 75%. Avoid windblown stans. Avoid cutting areas &amp; occupation on tree stumps above toe of bank.</p>
WILDLIFE/SUBSTINENCE					<p>Logging will result in loss of high quality habitat for brown bear, river otter, marten. No concern for deer.</p>
VISUAL/RECREATION					<p>Modest - MAX MOD. INTEGRITY: UNSEEN PREDITIVE /</p>
ARCHEOLOGICAL					<p>No significant artifacts found.</p>
CULTURAL					<p>W. Z. Knob Field Review: 7-19-92</p>

# Harvest Unit Design Card Ushk Bay EIS

Harvest Unit: 39  
VCU: 281  
Alternative(s): ROD

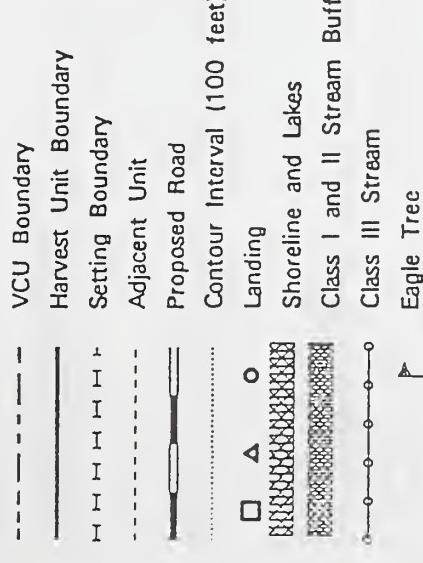
## Photo Information

Year 1986

Flight Line 25

Photo Number 112-113

### Legend



### Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

### IDT Review

Unit 39 as depicted in the FEIS is split into Unit 39 and Unit 39A in the Selected Alternative to reflect probable sale area boundaries.

M.J. Weber



UNIT DESIGN CARD

USHK MANAGEMENT AREA:

LUD: VCU: 28) UNIT: 39 ACRES: 31

LUD: VCU: 2.8 | UNIT: 39

RESOURCE (Name/Date)

## **RESOURCE CONCERNs (INCLUDING MGT. OBJECTIVES & MITIGATION)**

TIMBER/SILVICULTURE		TimType	X 44	X 45	TOT/ANO	CUTTING METHOD IS CLEAR CUT. NATURAL REGROWTH OF HERBACEOUS SHOULDS NOT SUFFICIENT.
	Acre					
MBF/species						PLANTING OF SITE SPECIES + TOLERATE CROVE IS RECOMMENDED FOR SITE PLANT/REFORESTATION IN ORDER TO MAINTAIN CURRENT SPECIES COMPOSITION. A PRE-COMMERCIAL THINNING IS ADVISED AT 15-20 YEARS TO ENHANCE GROWTH.
WH	88					IF POSSIBLE, LEAVE AT LEAST TWO SITES PER ACRE FOR DIVERSITY. THE PREVAILING PLANT ASSOCIATIONS ARE RELATED FROM MIXED COMMUNITIES WHICH IS LOW IN PRODUCTIVITY. THESE ASSOCIATIONS WHICH IS MORE SUITABLE TO HIGHLY PRODUCTIVE. THE NORTH-EASTERN POSITION OF UNIT BECOMES SOIL STORE WITHIN SUPPORT REACHING 80-90%. THIS MAY REQUIRE SOIL BORING TO ACT CONSIDERABLY SIGHTLY.
YR						
MH						
Other						
TOTAL						
MBF/ac						
Present Plant Assoc.	410	370				
Bio Index						
Regen Method						
Gross Growth	NOPC	SEPA				
N. Growth						

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ending: 39-139-239-339-4  
control: 39-1-7500

Statewide Fishery Review - 1990

DRAFTS / 342

MS/DSW 7/5/92

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Field Review: DSWB PLLC 6/3 92

WIDOW-E/SUBSISTENCE

Editorial Review: /

VLA 7/21/92

VISUAL/CREATION

SPECIALISTS

Field Review: 6/15 7-29-

PSYCHOLOGICAL

CULTURAL

No yarding difficulties anticipated. Unit boundary is altered where terrain slopes exceed 65%.	100' buffer for class II stream forming western boundary of unit. Log away from v-notch channels considered full or partial suspension, and ensure debris threat under scoured channels.	Protect V-notches, slides and gullies and control talus below the toes of failures and chutes. Site surveys absent the valley bottom.	Harvesting northern portion of unit will result in loss of high quality habitat for marten, otter, brown bear, and moderate quality deer winter range.	WARM NORTH POS. MAY BE VISIBLE FROM USHL BAY
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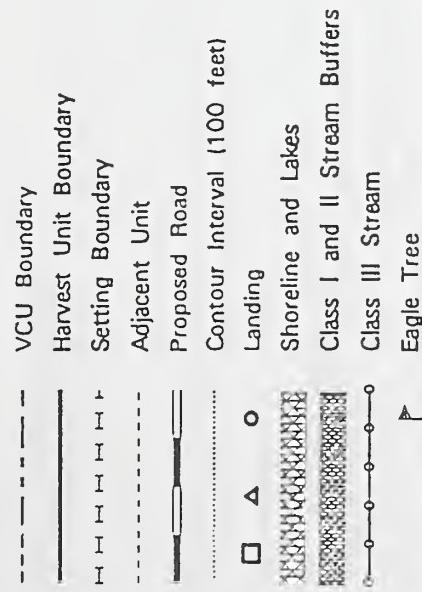
# Harvest Unit Design Card Ushk Bay EIS

Harvest Unit: 39A  
VCU: 281  
Alternativ(s): ROD

## Photo Information

Year 1986  
Flight Line 25  
Photo Number 113-1113

### Legend



### Logging System

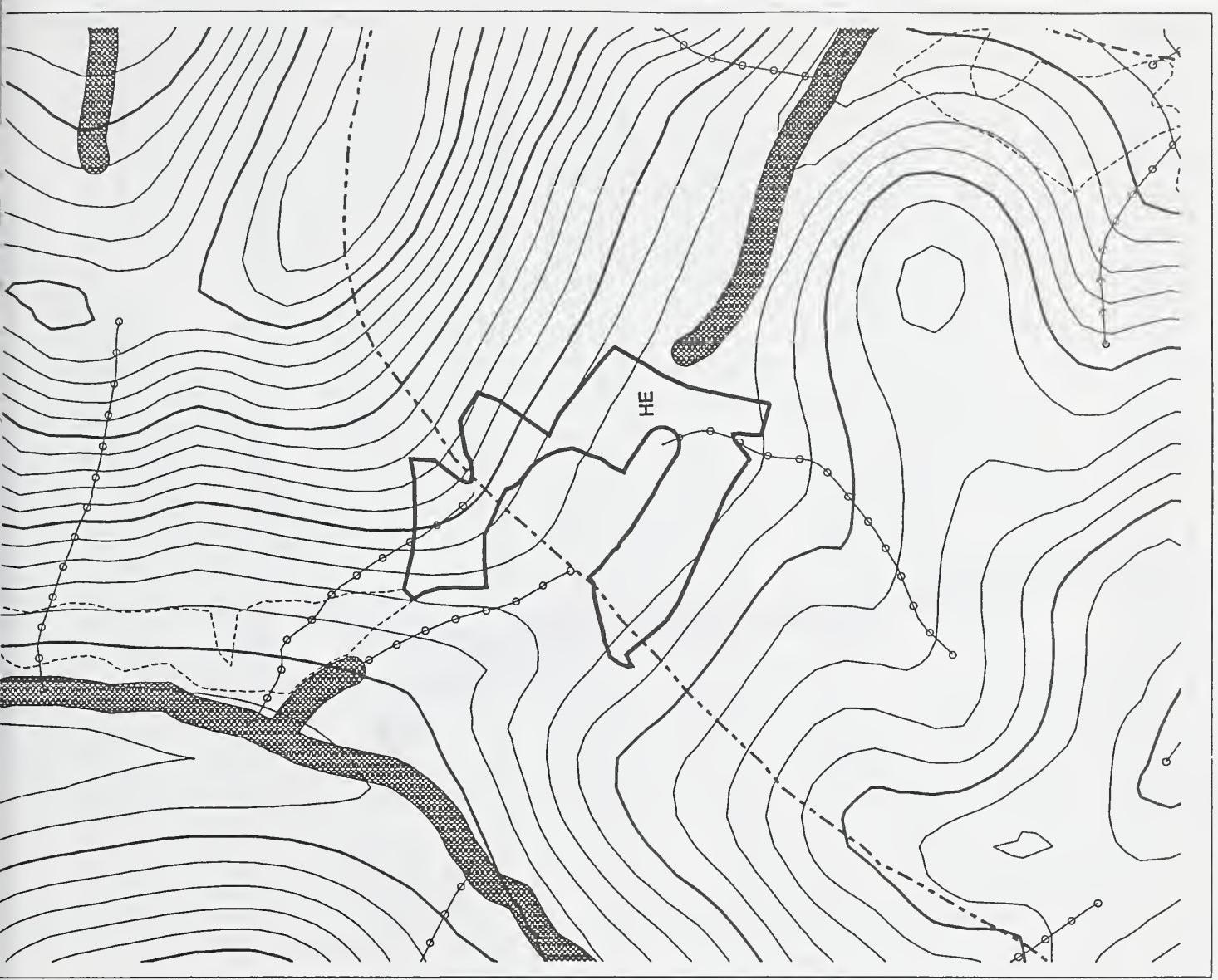
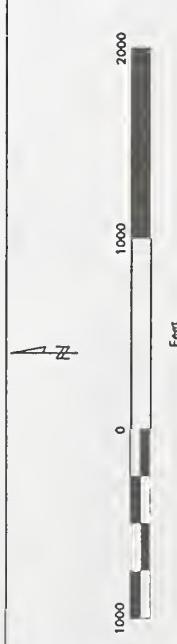
RS Running Skyline  
SL Slackline  
SSL Small Slackline  
H Highlead

HE Helicopter  
SV Shovel  
GR Gravity return

### IDT Review

Unit 39 as depicted in the FEIS is split into Unit 39 and Unit 39A in the Selected Alternative to reflect probable sale area boundaries.

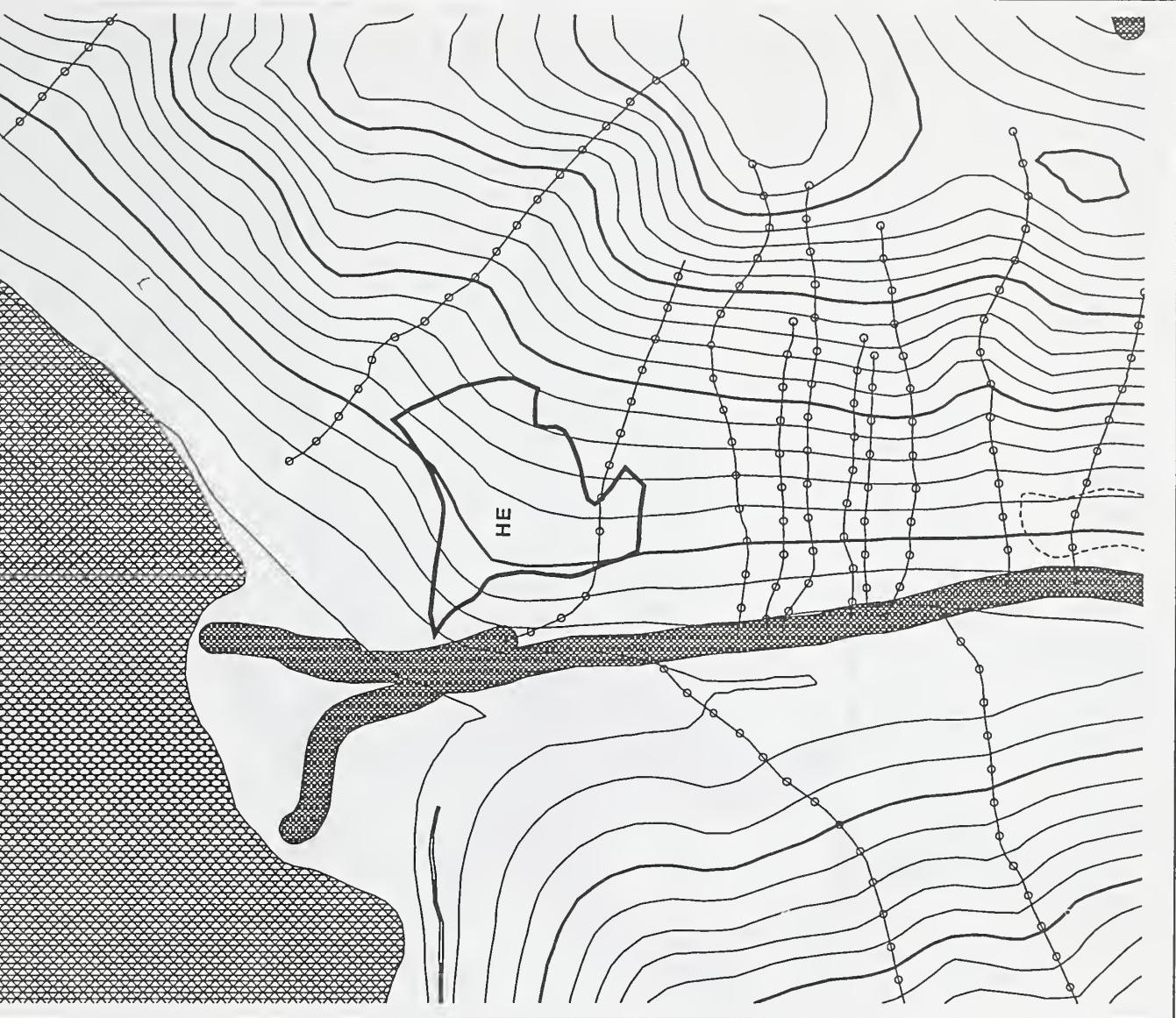
M.J. Weber



# UNIT DESIGN CARD

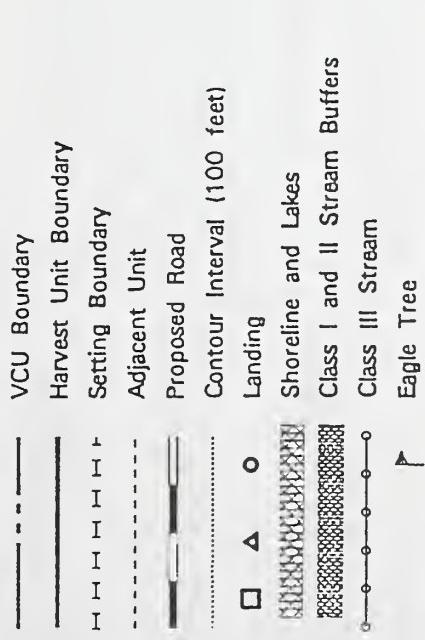
PROJECT:	USSHK	MANAGEMENT AREA:	VCU: 28	UNIT:	39A	ACRES:	47
RESOURCE/SILVICULTURE	RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)						
BLAND Exam:	T. PUSINA, S. ALLER 7/15/92	Tim Type	X 44	X 45	Total Av.		
Blnd Exam Type:	PLOTS	Acres					
Silviculturalist Review:	D. Smith 7/25/92	MBF/Species					
		WH					
		BB					
		VC					
		MH					
		Other					
		<b>TOTAL</b>					
		MBF/ac					
Prevalent Plant Assoc.	410	370					
Site Index							
Regen Method	Grose Growth	Hope	Stem	—			
N. Goshawk							
Wind Hazard (H/W)							
Damage (Insect, disease, animal, etc.)							
<b>LOGGING/TRANSPORTATION</b>							
Landing:	39-1-39-2, 39-1-39-4	Logging System:	Running Skyline				
Profiles:	39-1-39-2	Landings (# of Bellings):	4				
Field Review:	7-16-92	Class 1 or 2 Channel? Number	1				
		Class 3 Channels In Unit	3	Number:	1		
<b>WATERSHED/FISHERIES</b>							
V.D. ~	5/13/92	Avoid Slopes over 70%.	Avoid To Windfirm Stands.	Avoid cutting slopes above 70%.			
Field Review:	7/5/92						
DMS/DSW	7/5/92						
<b>SOILS/GEOLOGY</b>							
OSW & RPL	6/3 92	Avoid slopes over 70%.	Avoid To Windfirm Stands.	Avoid cutting slopes above 70%.			
Field Review:	7/21/92						
<b>WILDLIFE/SUBSTINENCE</b>							
VAC:		VAC:					
Perspective Plot:		Visibility:					
Field Review:	6/10 7/20/92	ROC:					
		Recreation Site:					
		Trail:					
<b>VISUAL/RECREATION</b>							
VAC:		VAC:					
Field Review:	6/10 7/20/92	Visibility:					
		ROC:					
		Recreation Site:					
		Trail:					
<b>ARCHEOLOGICAL CULTURAL</b>							
Field Review:	N/A	Outide designated h.h. - construction -	No	Survive			

# Harvest Unit Design Card Ushk Bay EIS



Harvest Unit:	40
VCU:	281
Alternative(s):	ROD
<b>Photo Information</b>	
Year	1986
Flight Line	25
Photo Number	114-115

## Legend



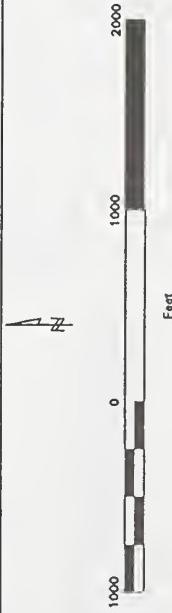
## Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

## IDT Review

The logging system is changed to helicopter to eliminate associated road construction called for in the FEIS.

M.J. Weber



# UNIT DESIGN CARD

PROJECT:

MANAGEMENT AREA:

LUD: VCU: 281 UNIT: 40 ACRES: 32

## RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)

RESOURCE (Name/Date)	TIMBER/SILVICULTURE	Tim Type	X44	X45	TOTANO
Acres	55	5			
MBF Specied					
Bland Exam:	6/25/92 K SENT H.WHITE	WH			
Bland Exam Type:	VARIABLE Plot; Fixed Plots	YC			
Silviculturalist Review:	Other	MH			
	TOTAL	Other			
	DBF/Ac				
Prevalent	210				
Plant Assoc.					
Ble Index					
Regen Method					
Gloss Growth					
N. Goshawk	None	OBSERVED			
Wind Hazard (H.M.U.)	H				
Damaged (dead, diseased, animal, etc.) ZONE STRIPPING					

LOGGING/TRANSPORTATION	
Landing:	40-1, 40-2
Profiles:	7/10/92
Field Review:	DSW 7/10/92

## WATERSHED/FISHERIES

DWS/DSW 7-5-92

Field Review:

0.0N 8/3/92

## SOILS/GEOLGY

PLS &amp; RPL 7/7 92

Field Review:

DSW 7/23 92

## WILDLIFE/SUBSTINENCE

Field Review:

7/21/92 VLA

## VISUAL/RECREATION

VAC:

Visibility:

ROC:

Recreation Site:

Trail:

Temporary spur w/ 20% grade access 40-1 to head portion above 75161 road. 1-36" lower suited except for landing or switchback in south where 1-6" lower prepared. Impacts all top of unit will be fixed by 6. Sustainable before final review. Risk exists since vegetated units minimize disturbance of other units scared spring discharge at base (n. end) of unit.
N. W corner of Unit at Spur begins Class I (r.c.10), 10' buffer recommended. Western border near class I stream, leave 100' buffer. <del>buffer</del> .

Excerpt for THE EXTREME NE AND NW CORNERS OF THE UNIT, AVOID THE UNIT STEEP SLOPES, SLIDE CAVES, AND FREQUENT DISSECTIONS. AVOID SLOPES WITH 35%. AVOID V-NOTCHES, LANDSLIDES, AND CAVES TO WINDFIRM STANDS. AVOID CUTTING BELOW THE SLOPES AS WELL THE PARTIAL LOGS SAWING SAW TIP OF UNIT WILL RESULT IN LOSS OF HIGH QUALITY HABITAT FOR MARTEN, OVEN, BROWN BEAR, AND MODERATE QUALITY DEER WINTER RANGE.
---

Class 1 or 2 Channel Number 2 Class 3 Channels In Unit Y Number: 5

Loggings saw tip of unit will result in loss of high quality habitat for marten, oven, brown bear, and moderate quality deer winter range.

Outside designated high sensitivity area - no survey required

# Harvest Unit Design Card

## Ushk Bay EIS

Harvest Unit: 72  
 VCU: 280  
 Alternative(s): ROD

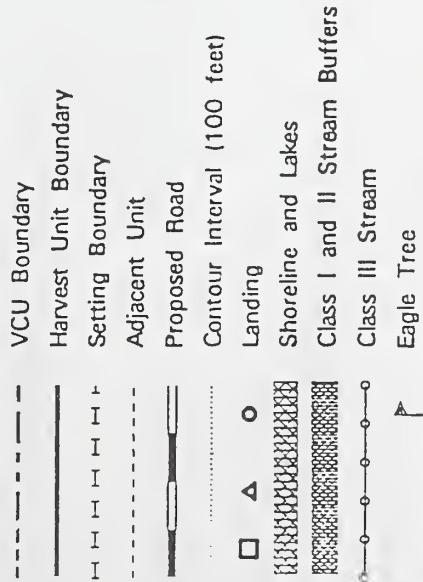
### Photo Information

Year 1986

Flight Line 24

Photo Number 134-135

#### Legend

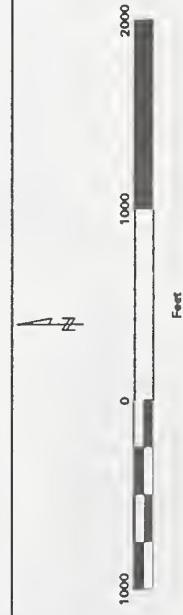


Logging System			
RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

### IDT Review

The western boundary of FEIS Unit 72 is pulled back from the Class I stream because of fisheries concerns. The northern boundary is pulled back to increase windfirmness of remaining trees.

M J Weber



## UNIT DESIGN CARD

MANAGEMENT AREA:

PROJECT: USHK LUD: VCU: 281 UNIT: 72 ACRE: 34

## RESOURCE CONCERNs (INCLUDING MGT. OBJECTIVES &amp; MITIGATION)

## RESOURCE (Name/Date)

## TIMBER/SILVICULTURE

	TimType	X44	X45	TOT/AVG
Acre				
MBF/species				
WH				
88				
Y.C.				
M.H.				
Other				
TOTAL				
DBF/Ac				
Preminent	120	120		
Plant Assoc.	510	510		
Slope Index				
Regen Method				
Gross Growth				
N. Goshawk	None seen			
Wind Hazard (H, M, L)	H			
Damaging (weed, disease, animal, etc.)				

## SUGGESTED CUTTING METHOD IN CLEAR-CUT. NATURAL REGENERATION OF HEMLOCK SHOULDER BE ADEQUATE, BUT PLANTING OF YELLOW CEDAR AND SITKA SPRUCE IS NECESSARY TO MAINTAIN CURRENT SPECIES COMPOSITION (NOTE: IT MAY BE NEEDED TO PLANT PLANTS NOT RECOMMENDED FOR COMMERCIAL THIN IN 15-20 YEARS TO ENHANCE DIVERSITY).

Prescribed and plant associated locations are W/H/B1/SA, which is a bi of dry productive site, and M/H/B3 (and variations), which is moderate to low in productivity. Deep V-notches are common in the north and east sections of unit.

UNIT BOUNDARY CHARACTERISTICS: Consider dropping east boundary to avoid steep slopes, V-notch in unstable areas.

## LOGGING/TRANSPORTATION

Landing: 72-1, -2, -3, -8, -9, -2-3  
Profile: 72-77, 72-8, -9  
Field Review: 7/26/92

## WATER SHED/ESTERIES

DRB/DSW 7/8/92  
Field Review: 08/22/92

## SOILS/GEOLOGY

Avoid THE EVEN HALF OF THE UNIT. AVOID & PROTECT V-NOTCHES LANDSLIDES, AND CRUMPS TO WIND FIRM STANDS. USE PRACTICAL LOG SUSPENSION ABOVE THE VALLEY BOTTOM.

## WILDLIFE/SUBSTINCE

OSW & PRL 6/2/92  
Field Review: 7/21/92

## VISUAL/RECREATION

VAC: P.R./MAX. MOA/MOD  
VAC: IN FERM.  
Visibility: MFG  
Rock: PRIMITIVE!  
Recreation Site: Trail:

## ARCHEOLOGICAL

CULTURAL  
Field Review: N/A

Some logging must occur over V-notch channels. Significant is soil stability issue. South-center portion of unit is least able to soil stability concerns, per geologist recommendation. Also SE portion deflected for some reason. Horizontal fall/yard away from buffer in log away from V-notch channels and consider fall on packed suspension. Log deck is cut at channels and remove it if it crosses grain. maintain 100' buffer on downstream class I stream running west edge of unit.

Logging western portion of unit will result in loss of habitat for otter, marten, brown bear. Logging central part of unit will impact moderate deer winter range.

Would not meet pos. would not be visited -

P.R./MAX. MOA/MOD  
IN FERM.  
MFG  
PRIMITIVE!  
Rock:  
Recreation Site:  
Trail:

OUTSIDE HIGH-SENSITIVITY ZONE - no survey required

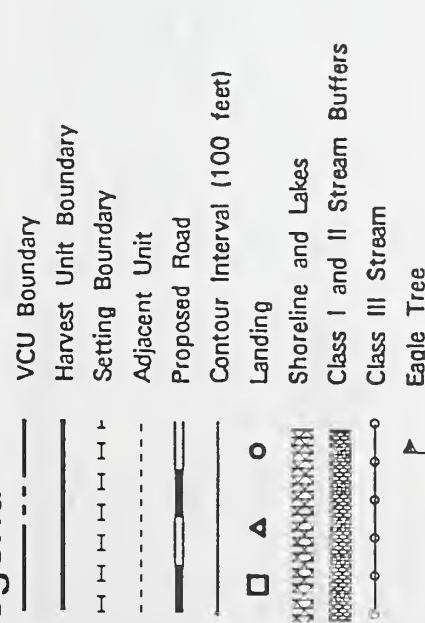
# Harvest Unit Design Card Ushk Bay EIS

Harvest Unit: 74A  
VCU: 281  
Alternative(s): ROD

## Photo Information

Year 1986  
Flight Line 24  
Photo Number 135-136

### Legend



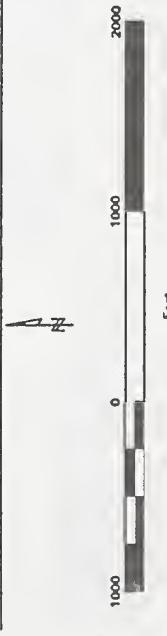
### Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

### IDT Review

The boundaries of FEIS Unit 74A are adjusted as further assurance that the stream buffer between 74A and 74 will be windfirm.

M.J. Weber





# Harvest Unit Design Card

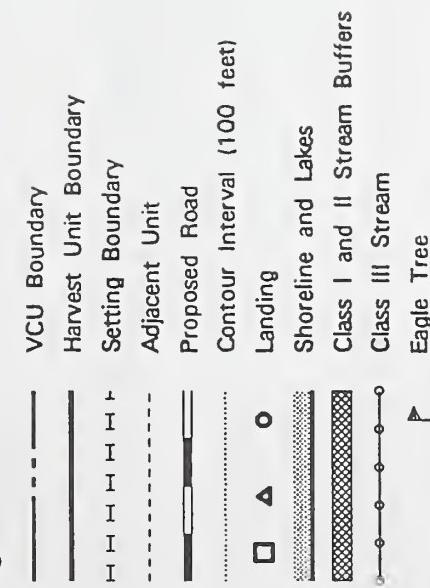
## Ushk Bay EIS

Harvest Unit: 77  
 VCU: 281  
 Alternative(s): ROD

### Photo Information

Year: 1986  
 Flight Line: 23  
 Photo Number: 11-12

### Legend



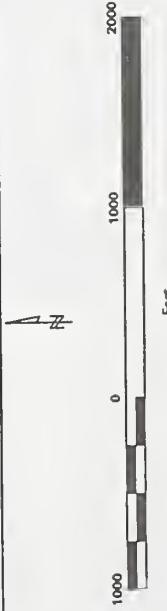
### Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

### IDT Review

The two northern most settings of FEIS Unit 77 are dropped for hydrology and fisheries concerns and as further assurance that the stream buffer between Units 77 and 16A will remain windfirm.

M.J. Weber



PROJECT: USHK	MANAGEMENT AREA:	LUD: VCU: 281	UNIT: 77	ACRES: 1/2
RESOURCE (Name/Date)	RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)			
TIMBER/SILVICULTURE	<p>Tim Type: X44 X45 X46 Area: 25 27 18 MBF/Bordee: WH WH 88 YC MH Other TOTAL MBF/LC</p> <p>Present Plant Assoc. Site Index Regen Method Gross Growth H. Goshawk Wind Hazard (H.W.) H-1 Damage (insect, disease, animal, etc.)</p>	<p>RECOMMEND CLEAR-CUT SYSTEM. NATURAL REGENERATION OF HEMLOCK SHOULD BE ADEQUATE. PLANTING OF YELLOW CEDAR MAY BE NECESSARY TO MAINTAIN SPECIES COMPOSITION. A PRECOMMERICAL THINNING AT 15 TO 20 YEARS TO ENHANCE GROWTH MAY BE NECESSARY.</p> <p>PREDOMINANTLY WH/YC/BK - ANT ASSOC., WITH SEVERAL OTHER TYPES OF ASSOCIATIONS PRESENT - SITES ARE MODERATE TO HIGH PRODUCTION.</p>		
B Land Exam: 6/4/92 K. SEITZ S. ALLEN B Land Exam Type: VARIABLE PLOT; Fixed Plots B Silviculturalist Review: S. Smith 7/26/92				
LUGGING/TRANSPORTATION	<p>Landing: 3 Profiles: 1/1 Field Review: 1/1</p>	<p>Log away from V-notch channels &amp; prevent debris from entering channels if cut across it. Minimize disturbance in one stand of wetlog &amp; riparian wetlands. Main him 100' buffer for class II stream for mtn. eastern boundary and class III forming part of northern boundary. Recommended for buffer on class III stream if silting occurs BUT OR FIRM WITHIN</p>		
WATERSHED/FISHERIES				
DNR/DSW 7/6/92 Field Review: D DN 8/13/92				
SOILS/GEOLOGY	<p>Avoid tree height differences, and slide chutes to windbreak stands. Avoid cutting south of the low ridge above the ravine on the eastern side suspension above the valley bottom.</p>	<p>Harvesting eastern portion of unit will result in loss of high quality habitat for marten, otter, brown bear. Harvesting deer winter range most of unit will impact moderate quality deer winter range.</p>		
OSW & RPL 6/2 92 WILDLIFE/SUBSTINENCE				
Field Review: VLA 7/20/92				
VISUAL/RECREATION	<p>VAO: MODIF. VAC: INF. Visibility: UNSEEN ROC: PREMINIVE I Recreation Site: TROLL</p>	<p>(Not Near Pos.)</p>		
ARCHEOLOGICAL CULTURAL				
Field Review: N/A				

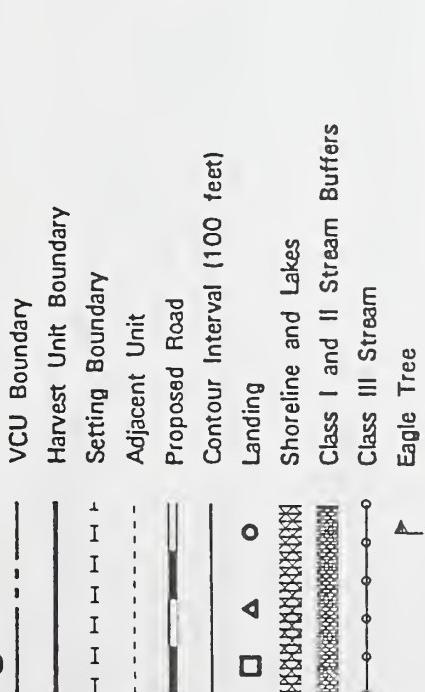
# Harvest Unit Design Card Ushk Bay EIS

Harvest Unit: 79  
VCU: 281  
Alternative(s): ROD

## Photo Information

Year 1986  
Flight Line 22  
Photo Number 163-164

### Legend



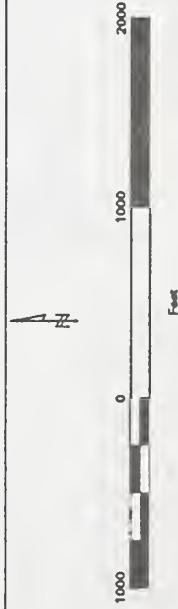
### Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

### IDT Review

The eastern boundary of FEIS Unit 79 is adjusted as further assurance that the stream buffer between 79 and 79A will be windfirm.

MJT Webber





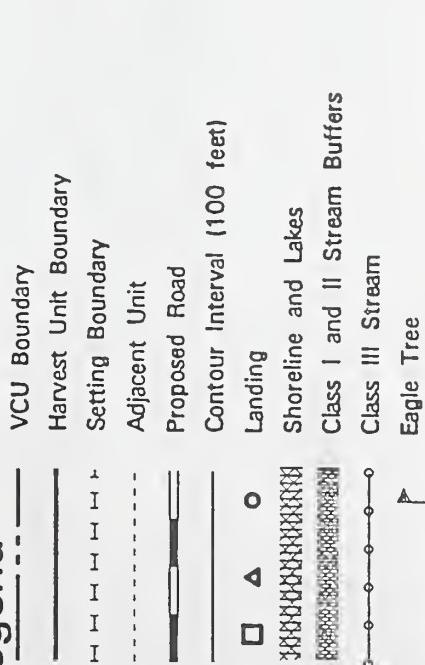
# Harvest Unit Design Card Ushk Bay EIS

Harvest Unit: 79A  
VCU: 281  
Alternative(s): ROD

## Photo Information

Year 1986  
Flight Line 22  
Photo Number 163-164

### Legend



### Logging System

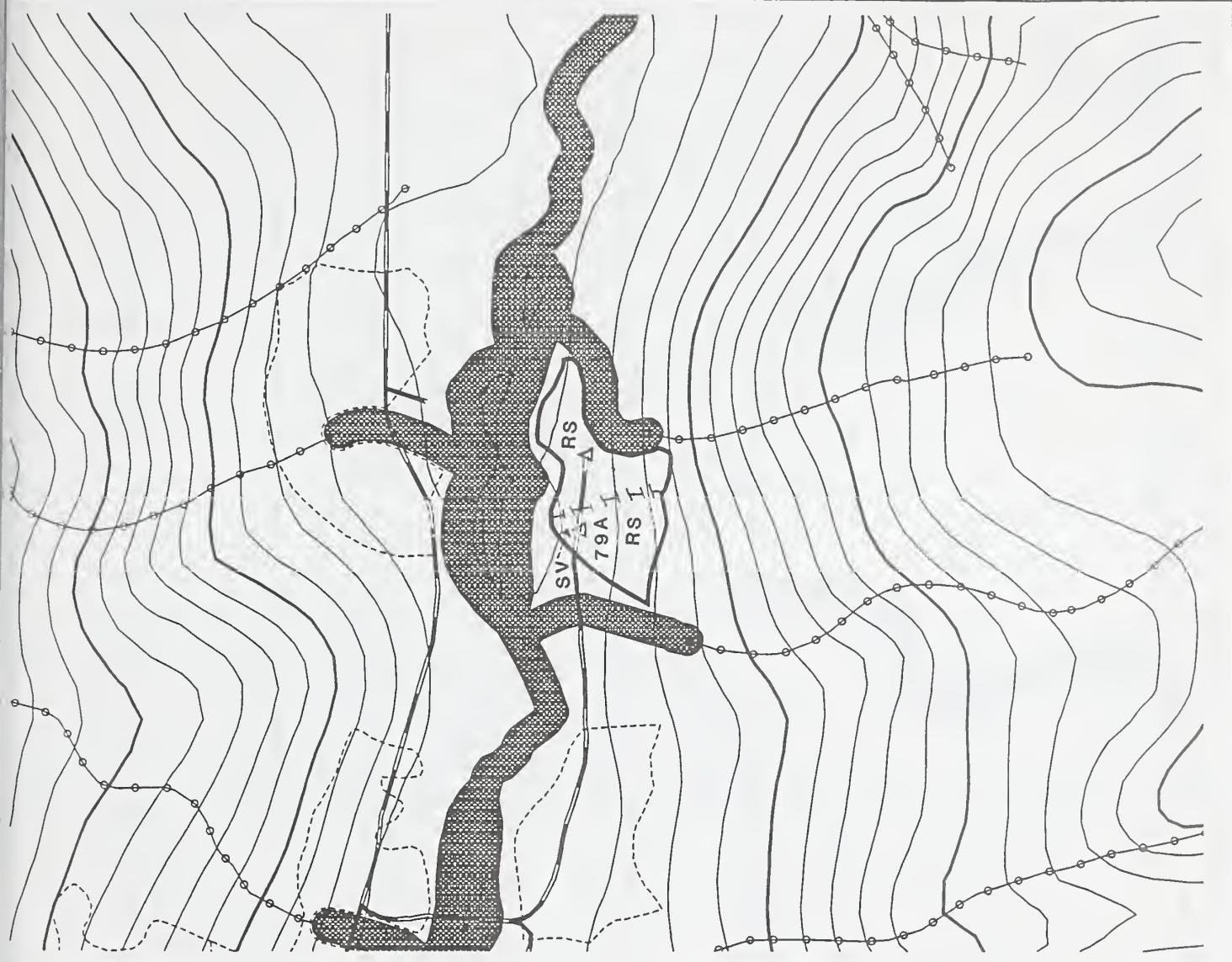
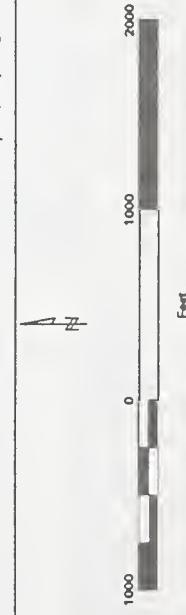
RS Running Skyline  
SL Slackline  
SSL Small Slackline  
H Highhead

HE Helicopter  
SV Shovel  
GR Gravity return

### IDT Review

The western boundary of FEIS Unit 79A is adjusted as further assurance that the stream buffer between 79 and 79A will be windfirm.

M.J. Webley



# UNIT DESIGN CAHD

## MANAGEMENT AREA:

PROJECT: USHK  
RESOURCE (Name/Dates)

## TIMBER/SILVICULTURE

	Tim Type	X44	X45	
Acre				
MBF/Bordeas				
WH				
BB				
YC				
MH				
Other				
<b>TOTAL</b>				
MBF/Ac				
Prevalent	210	110		
Plant Assoc.				
Slo Index				
Regen Method				
Gross Growth				
N. Goshawk	None	seen	—	
Wind Hazard (High, M, L)				
Damages (seed, disease, animal, etc.)	stem decay (minor)			

## LOGGING/TRANSPORTATION

Landing: 79-1, 2, 5  
Profiles: 77-4-45

## FIELD REVIEW:

7-6-92

## WATERSHED/FISHERIES

Permit issued 7-6-92

## FIELD REVIEW:

DDN 2/24/92

## SOILS/GEOLOGY

Avoid slopes over 70%.

## WILDLIFE/SUBSTINENCE

## FIELD REVIEW:

DSW & RUE 6/1 92

## VISUAL/RECREATION

VAC: None  
Visibility: INFER.  
ROC: INFER.  
Recreation Site: Tress.

## ARCHEOLOGICAL CULTURAL

Field Review: 7/26/92

Field Review: 7/26/92

## ACRES: 15

## UNIT DESIGN CAHD

## UNIT: 79-A

## UNIT: 281

## UNIT: 79-A

## UNIT

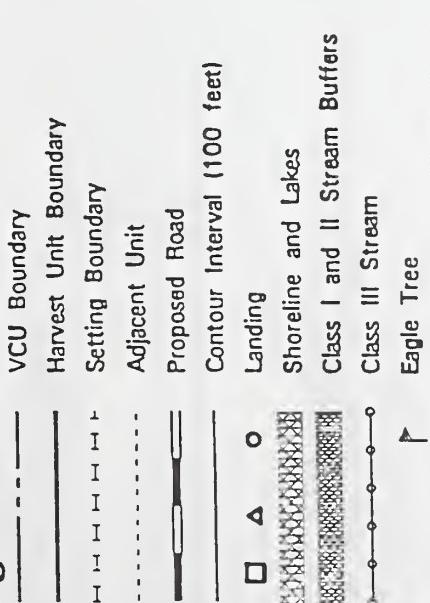
# Harvest Unit Design Card Ushk Bay EIS

Harvest Unit: 82  
 VCU: 281  
 Alternative(s): ROD

## Photo Information

Year 1986  
 Flight Line 23  
 Photo Number 16-17

### Legend



**Logging System**  
 RS Running Skyline  
 SL Slackline  
 SSL Small Slackline  
 H Highlead

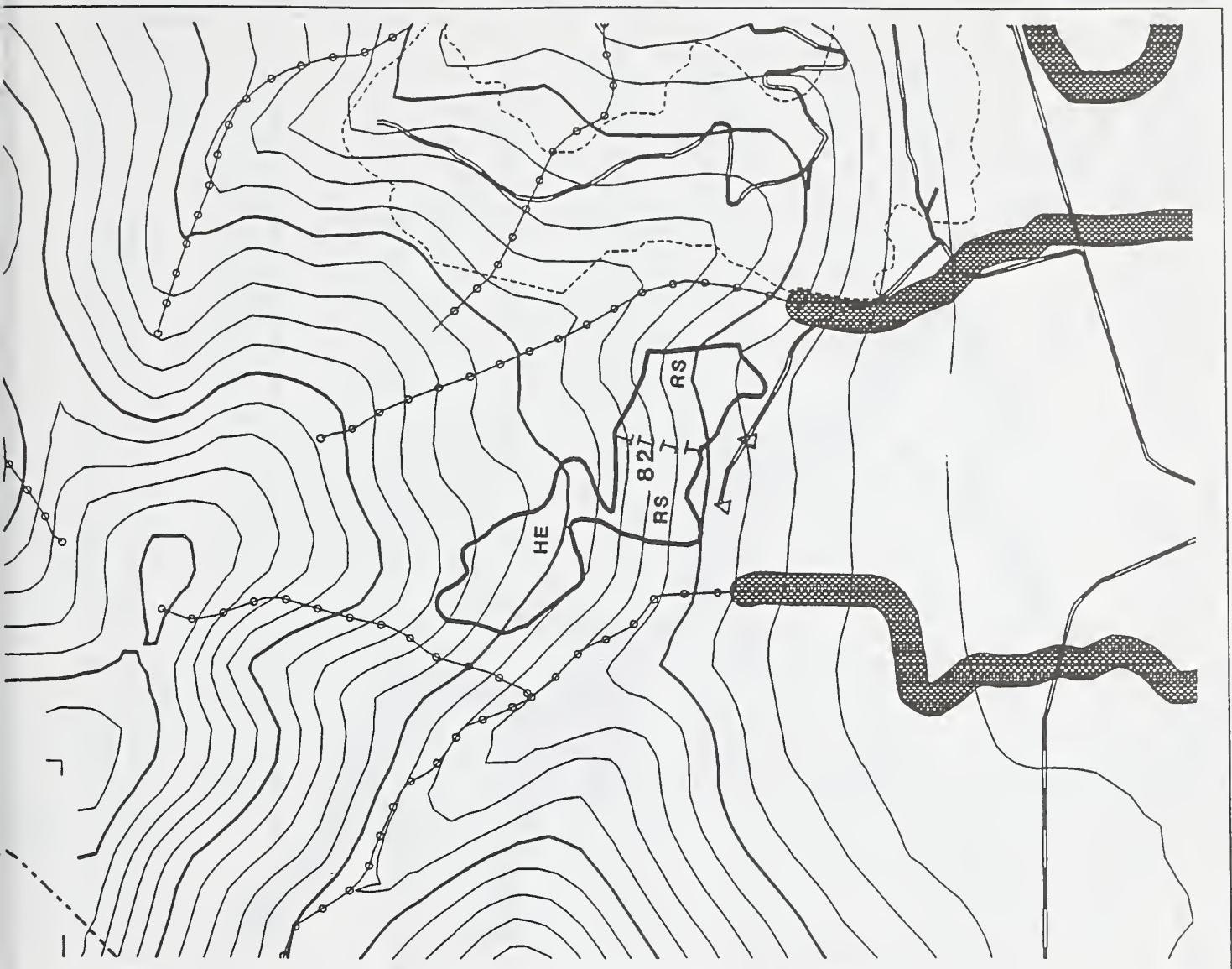
**HE**  
 SV  
 GR

**Helicopter**  
 Shovel  
 Gravity return

### IDT Review

The eastern most setting of FEIS Unit 82 is dropped as further assurance that the area between 82 and 13 will be windfirm.

M.J. Weber



# UNIT DESIGN CARD

**PROJECT:** USHK

**MANAGEMENT AREA:**

**LUD:** VCU: 2.81 **UNIT:** 82 **ACRES:** 29

## RESOURCE CONCERNs (INCLUDING MGT. OBJECTIVES & MITIGATION)

RESOURCE (Name/Date)	Tim Type	X44	TOT/AV
Acacia			
MBF Specied			
WH			
BB			
YC			
MH			
Other			
<b>TOTAL</b>			
DBH/AC			
Prevalent	210		
Plant Assoc.			
Site Index			
Regen Method			
Gross Growth			
N. Growth			
Wind Hazard (H.M.)	M		
Damge Sned, disease			
animal, c.c. CEDAR DECLINE			

**Plots**  
Silvicultural Review:  
D.J. Smith  
7/28/92

## LOGGING/TRANSPORTATION

Landing: 82-2, 82-3, 13-5	7/7/92
Profile: 82-2, 82-3, 265	
Field Review:	
FIS/RRL 7-4-92	

## WATERSHED/FISHERIES

DSW	7/21/92
Field Review:	0.00

## SOILS/GEOLOGY

PLS & RPL	7/9 92
Field Review:	

## WILDLIFE/SUBSISTENCE

Field Review:	7/21/92
VLA	

## VISUAL/RECREATION

VAC:	PR
Visibility:	LOW
AOI:	ME
Recreation Site:	Prelim/ive I

## PERSPECTIVE PLOTS:

Field Review:	7/26/92
Troll:	

## ARCHEOLOGICAL/CULTURAL

Field Review: N/A

Outside Sensitive Area - No Survey Necessary

RECOMMENDED CUTTING SYSTEM IS CLEAR CUT. NATIVE REGENERATION OF TEMLOCKS SHOULD BE SUFFICIENT. ADVISE PLANTING OF YEW LOW STAND FOR PESTERATION. IF CURRENT SPECIES COMPOSITION IS TO BE MAINTAINED, A PRE-CONOMIC TREATMENT AT 15-20 YEARS WILL ENHANCE GROWTH.

THE PREVIENT PEST ASSOC. IS WH-TC/B3 WHICH IS MODERATELY PRODUCTIVE. SEVERE CEDAR DECLINE IS PRESENT THROUGHOUT THE SOUTHERN HALF OF THE UNIT. THESE AREAS ARE VERY BOULTY AND BRUSHY. THE ONLY FEASIBLE AREA TO BE LOGGED IN THE WESTERN PORTION OF THE UNIT IS NEAR THE CEDAR, BUT MANAGE 100' BUFFER 320'.

Helicopter ground could instead be accessed by 25% grade, grubbing tracks, but this option was rejected. Snag retention is a safety issue. Full suspension not feasible.

Log away from mountain drainage, and if it does, remove it. minimize disturbance to muskegs. Consider log log transport. No fisheries concerns.

FREQUENT DISSECTIONS, EXISTING FAUCES, AND POLES! VNOTCHES AND LANDSCAPE CUTURES & TALUS TO ABOVE THE HEAD AND BELOW THE TOES OF THE ADDING. NO CONCERN FOR MARTEN, OTTER, BROWN BEAR. SW PORTION OF UNIT IS MODERATE QUALITY DEER WINTER RANGE.

WOULD NOT MAT POS. MAY BE PANTHER VISIBLIE.

# Harvest Unit Design Card Ushk Bay EIS

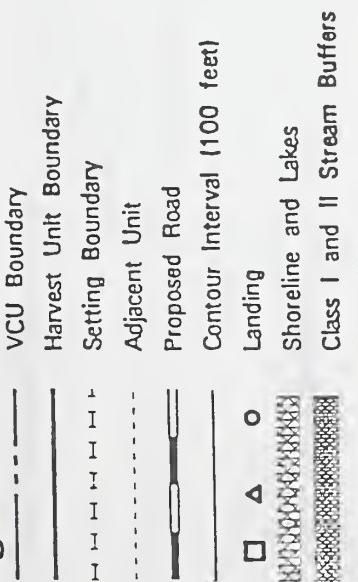
Harvest Unit: 86  
VCU: 281

Alternative(s): ROD

## Photo Information

Year 1986  
Flight Line 24  
Photo Number 128-129

### Legend



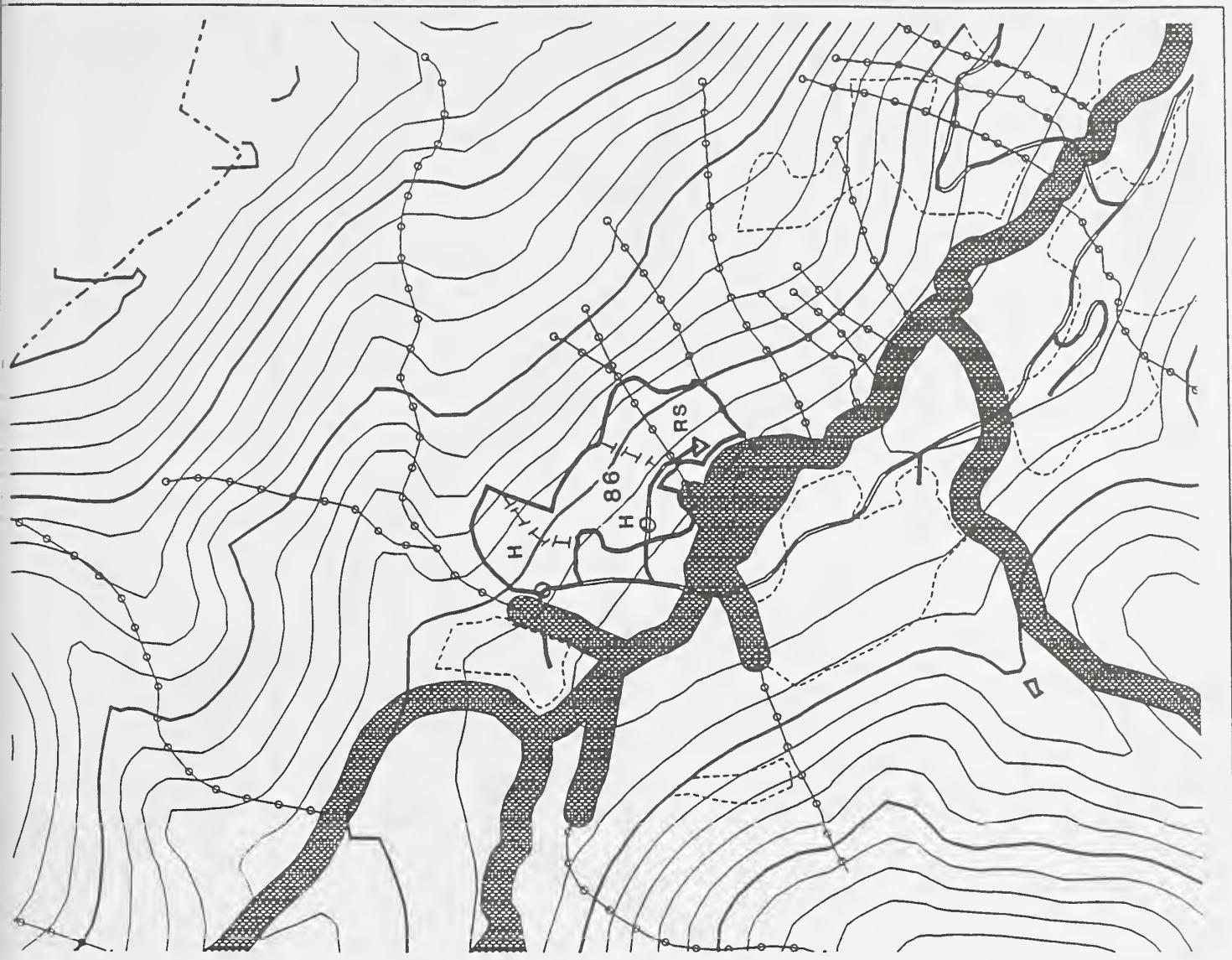
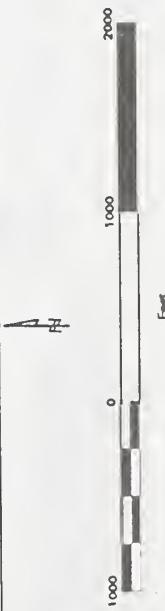
### Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

### IDT Review

The 2 southern most settings of PEIS Unit 86 are dropped because of hydrology and fisheries concerns.

M.J. Webster



# UNIT DESIGN CARD

**PROJECT:** ISHK

**MANAGEMENT AREA:**

**RESOURCE (Name/Date)** **ACRES:** 2/1

## TIMBER/SILVICULTURE

Plot Type	X 44	X 45	TOT/AVG
Acres			
MBF/Bspecies			
WH			
BB			
YC			
MH			
Other			
<b>TOTAL</b>			
Prevalent			
Plant Assoc.	220	110	
Site Index			
Regen Method			
Gross Growth			
N. Goshawk			
Wind Hazard (H.W.)			
Damages (snags, disease, animal, etc.)			

## LOGGING/TRANSPORTATION

Landing: 86-1, -5, -7, -9, -11

Profile: Field Review: 86-2

## WATERSHED/FISHERIES

CW #73/92  
Field Review: 86-2  
Plots: 713/42

## SOILS/GEOLOGY

Log type: 200'. Avoid traces to windfirm. Avoid the NE'ern & NW'ern corners of the old unit #37 which is contained in this unit #36. Preclude a 100' ft radius from the unit #36. It will affect the entire unit #36.

## WILDLIFE/SUBSTINENCE

Field Review: YL #7/21/92

## VISUAL/RECREATION

YOO:  Low  
VAC:  High  
Visibility:   
ROC:   
Recreation Site: Trail:

## ARCHEOLOGICAL CULTURAL

Field Review:  A

**LAND USE:** VCU: 281 **UNIT:** 86 **ACRES:** 2/1

## RESOURCE CONCERN'S (INCLUDING MGT. OBJECTIVES & MITIGATION)

RECOMMENDED CUTTING METHOD: IS CLEAR-CUT. NATURAL REFORESTATION OF HEMLOCK SHOULD BE SUFFICIENT. PRACTICE OF YERCON COARE AND SITKA SPICE FOR RETENTION CREATION/ SITE PREP. IS ADVISED TO MAINTAIN CURRENT SPECIES AND VISITOR. A PRE-COMMERCIAL THINNING AT 15-20 yrs. IS RECOMMENDED TO ENHANCE GROWTH. LEAVE LOWEST PORTION OF UNIT HERE FOR DIVERSITY IF POSSIBLE. LOWER PORTION OF UNIT HAS SPARSE PLANT ASSOCIATIONS AND IS HIGHLY PREDOMINANT PLANT ASSOCIATION ARE WH-YC/BB/SC, WH/BB (AND VARIATIONS THEREOF), AND SS, WHICH ARE MODERATE TO HIGHLY PRODUCTIVE. THERE ARE POCKETS OF POORLY DRAINED (ALSO CHOG/MUDHOG) WHERE CEDAR DECLINE IS OBSERVED. VERY STEEP PITCHES (200%) NUMEROUS minor draws AND CREEKS AND UNSTABLE SOIL (SLIDES) WERE OBSERVED. A DEEP V-NOTCH SHOULD BE AVOIDED.

FULL SUGGESSION: generally NOT PRACTICAL. FULL/Partial away from stream buffer. Exclude unstable portion in western portion - active slides near creek. Snag retention is safety issue. Log away from existing channels and watercourses. PREVENT DELAYED LOGGING DRIFTS AND IT IS BEST TO REMOVE THEM IMMEDIATELY. Minimize log pile buffer or class I stream forming south boundary and one class II stream tributary.

NOTICE: IN UNIT #36, DO NOT ANNUALLY CUT LOGS FROM THE OLD UNIT #37 WHICH IS PART OF THE NEW UNIT. EUTELIC FIRMING IS ALLOWED IN THIS UNIT. USE PART #36. It WILL AFFECT THE ENTIRE UNIT #36. Harvesting eastern portion of unit will result in loss of high quality habitat for winter and moderate to high quality deer winter range.

WOULD NOT NEED LOGS. WOULD ONLY NOT BE PRACTICAL UNLESS ADDITIONAL UNIT CUT (6)

OUTSIDE HIGH-SENSITIVITY ZONE - NO CONTROL MEASURES SURVEY REQUIRED

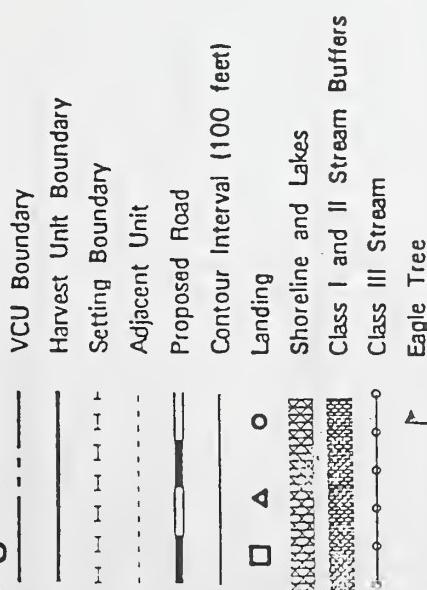
# Harvest Unit Design Card Ushk Bay EIS

Harvest Unit: 90  
VCU: 281  
Alternative(s): ROD

## Photo Information

Year 1986  
Flight Line 23  
Photo Number 16-17

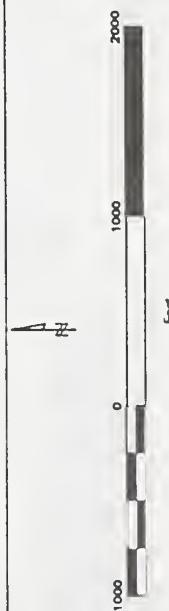
## Legend



## IDT Review

The crosshatched area below the road will be feathered (30% of the timber removed) to increase windfirmness of the remaining trees.

M.J. Weber



## UNIT DESIGN CAHU

**PROJECT:** USHK

**MANAGEMENT AREA:**

**LUD:** VCU: 281 **UNIT:** 90 **ACRES:** 46 (43 cut)

### RESOURCE/SILVICULTURE

Timber Type	Acres	TOT/AVG
MBF/Species		
WH	89	
YC		
MH		
Other		
<b>TOTAL</b>		
BBF/AC		
Prevent.		
Plant Assoc.		
Site Index		
Regen Method		
Gross Growth		
N. Goshawk		
Wind Hazard (H.M.L.)	H	
Damages (insect, disease, animal, etc) P.D.P.R.C. Hopping		

**Stand Exam:** M. White, K. Seitz  
6/16/92  
**Stand Exam Type:**  
Plots  
**Silviculturalist Review:**  
S. Arnold  
7/26/92

Recommend Clearcut System. Natural Regeneration of Hemlock should be adequate although planting is desired to maintain species composition. A pre-commercial thinning of age 15-20 may be necessary to enhance growth. Predominately a WH/YC / BB Plant association indicating a moderately productive site.

### RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)

**TOPOGRAPHY**  
Guy lines for swing yarder will require the back of landing 90-1. Safety requirements dictate the landing 90-1 location outside Unit boundary and necessitates the landing through 400' of non-hemlock forest. Consider flat landing options if possible. Draining and removing timber from the area will result in loss of habitat and will require buffers from Class 2 and 3 streams. Should be a minimum of 100' buffer from Class 2 and 3 streams. Should be a minimum of 100' buffer for class 5 stream running North boundary.

**WILDLIFE/TRANSPORTATION**  
AUGUST 1992 - 7/13/92 +  
Landing: 90-1-290  
Profiles: 90-1-290  
Field Review: D.L. 7-13-92  
PSIRRL 7-8-92  
Field Review:  
00 ~ 9/2/92

Harvesting northern strip of unit will result in loss of high quality habitat for marten. No concerns for bear, otter, or deer.

**SOILS/GEOLOGY**  
PLS & RPL 7/13/92  
Field Review:  
(+) 7/13/92

WILDLIFE/SUBSISTENCE

Field Review:  
VLA 7/22/92

Perspective Plots:  
Recreation Site:  
Trail:

Would not affect pos. SE portion may be visible from Unit B 31.

### ARCHEOLOGICAL CULTURAL

Field Review: N/A

Outside Sensitive Area - No Survey Necessary

# Harvest Unit Design Card Ushk Bay EIS

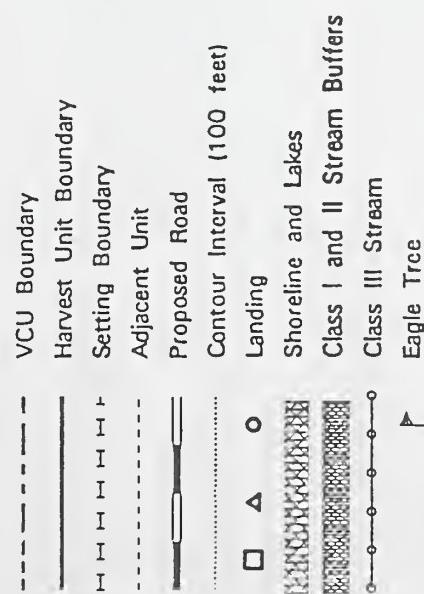
Harvest Unit: 93  
VCU: 281

Alternative(s): ROD

## Photo Information

Year 1986  
Flight Line 26  
Photo Number 5-6

### Legend



### Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

### IDT Review

The logging system is changed to helicopter to eliminate associated road construction called for in the FEIS.

M.J. Weber



## UNIT DESIGNATION

PROJECT: USHK	MANAGEMENT AREA:	LUD: YCU; 281	UNIT: 93	ACRES: 32
RESOURCE (Name/Date)	RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)			
TIMBER/SILVICULTURE	<p>Blnd Exam: S. Allen, T. Pusina 6/17/92</p> <p>Blnd Exam Type:  <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>Silviculturalist Review:  <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>Date: 7/28/92</p>	<p>Tim Type: X445 H44 H45</p> <p>Acres: 88</p> <p>MBF/Sq Miles: WH</p> <p>Plots: YC</p> <p>MH</p> <p>Other</p> <p>TOTAL: 210</p> <p>MBF/Ac: 0.00</p> <p>Prevalent Plant Assoc.: 210</p> <p>Site Index: 210</p> <p>Regen Method: Gross Growth</p> <p>N. Goshawk: Moderate</p> <p>Wind Hazard (H,M,L): H</p> <p>Damages (need, disease, animal, etc.)</p>	<p>Cutting method suggested is clear-cut. Natural regeneration of hemlock should be adequate but planting of yellow cedar is necessary to maintain current diversity composition. Pre-commercial thin in 15 - 20 years to enhance growth.</p> <p>Predominant plant association is WH-YC/BB, a moderately productive site. The upper (N) portion of unit contains mountain hemlock stands (average dbh <math>\geq</math> 12') which should not be cut. Steep slope (70 - 98%) occurs in lower portion of unit, and at Northern-most boundary. Lower northern boundary at UNIT Boundary Change: lower northern boundary to avoid low productivity MH stands and steep slopes. Also, may have to circumvent lower steep slopes towards S boundary.</p>	<p>Cutting method suggested is clear-cut. Natural regeneration of hemlock should be adequate but planting of yellow cedar is necessary to maintain current diversity composition. Pre-commercial thin in 15 - 20 years to enhance growth.</p> <p>Predominant plant association is WH-YC/BB, a moderately productive site. The upper (N) portion of unit contains mountain hemlock stands (average dbh <math>\geq</math> 12') which should not be cut. Steep slope (70 - 98%) occurs in lower portion of unit, and at Northern-most boundary. Lower northern boundary to avoid low productivity MH stands and steep slopes. Also, may have to circumvent lower steep slopes towards S boundary.</p>
LOGGING/TRANSPORTATION	<p>Landing: 4</p> <p>Profiles: o</p> <p>Field Review:  F-2-92</p>	<p>Log landing from southern drainage and trail down south side of unit. Avoid north side of unit due to steepness and potential landslides from cutting the branches and logs. Log landing from southern drainage and trail down south side of unit. Avoid north side of unit due to steepness and potential landslides from cutting the branches and logs. Log landing from southern drainage and trail down south side of unit. Avoid north side of unit due to steepness and potential landslides from cutting the branches and logs. Log landing from southern drainage and trail down south side of unit. Avoid north side of unit due to steepness and potential landslides from cutting the branches and logs.</p>	<p>Log landing from southern drainage and trail down south side of unit. Avoid north side of unit due to steepness and potential landslides from cutting the branches and logs. Log landing from southern drainage and trail down south side of unit. Avoid north side of unit due to steepness and potential landslides from cutting the branches and logs. Log landing from southern drainage and trail down south side of unit. Avoid north side of unit due to steepness and potential landslides from cutting the branches and logs.</p>	<p>Log landing from southern drainage and trail down south side of unit. Avoid north side of unit due to steepness and potential landslides from cutting the branches and logs. Log landing from southern drainage and trail down south side of unit. Avoid north side of unit due to steepness and potential landslides from cutting the branches and logs.</p>
WATERSHED/FISHERIES	<p>PLS 7-18-42</p> <p>Field Review:  6/30/92 Ad</p>	<p>Harvesting southern edge of unit will result in loss of high quality marten habitat and high quality deer winter range.</p>	<p>V-notches, landslide, and avalanche chutes, and suspended landslide material at the toe of the slope on the N side of the marten bench. Avoid the steep slope above the shoreline terrace along the SW corner of the unit. Use natural use suspension yards.</p>	<p>V-notches, landslide, and avalanche chutes, and suspended landslide material at the toe of the slope on the N side of the marten bench. Avoid the steep slope above the shoreline terrace along the SW corner of the unit. Use natural use suspension yards.</p>
SOILS/GEOLGY	<p>PSL &amp; RPL 7/17 92</p> <p>Field Review: OSW 7/20 92</p>	<p>Avoid slopes &gt; 65%: avoid &amp; protect and talus. Possibly avoid slope on the N side of the marten bench. Terence along the SW corner of the unit.</p>	<p>Avoid slopes &gt; 65%: avoid &amp; protect and talus. Possibly avoid slope on the N side of the marten bench. Terence along the SW corner of the unit.</p>	<p>Avoid slopes &gt; 65%: avoid &amp; protect and talus. Possibly avoid slope on the N side of the marten bench. Terence along the SW corner of the unit.</p>
WILDLIFE/SUBSISTENCE	<p>Field Review: VL 4 7/22/92</p>	<p>VAC: VAC: Visibility: ROC: Recreation Blk: Troll:</p>	<p>Wards not near toes. Visible from Vahr Bay.</p>	<p>VL 4 7/22/92</p>
VISUAL/RECREATION	<p>Perspective Photo:</p> <p>Field Review: Et/EP 7/20-92</p>	<p>PPR → MG ↓ LDU PPM. E / SPM</p>	<p>Outside Sensitive Area - No Survey Necessary</p>	<p>VL 4 7/22/92</p>
ARCHEOLOGICAL	<p>Field Review: N/A</p>			
CULTURAL				

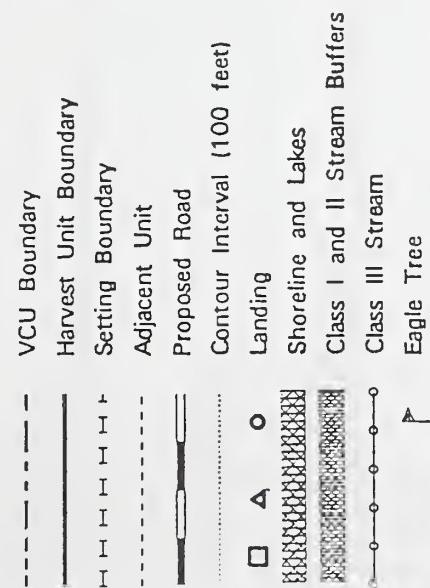
# Harvest Unit Design Card Ushk Bay EIS

Harvest Unit: 101  
VCU: 279  
Alternatives: ROD

## Photo Information

Year 1986  
Flight Line 26  
Photo Number 13-14

### Legend



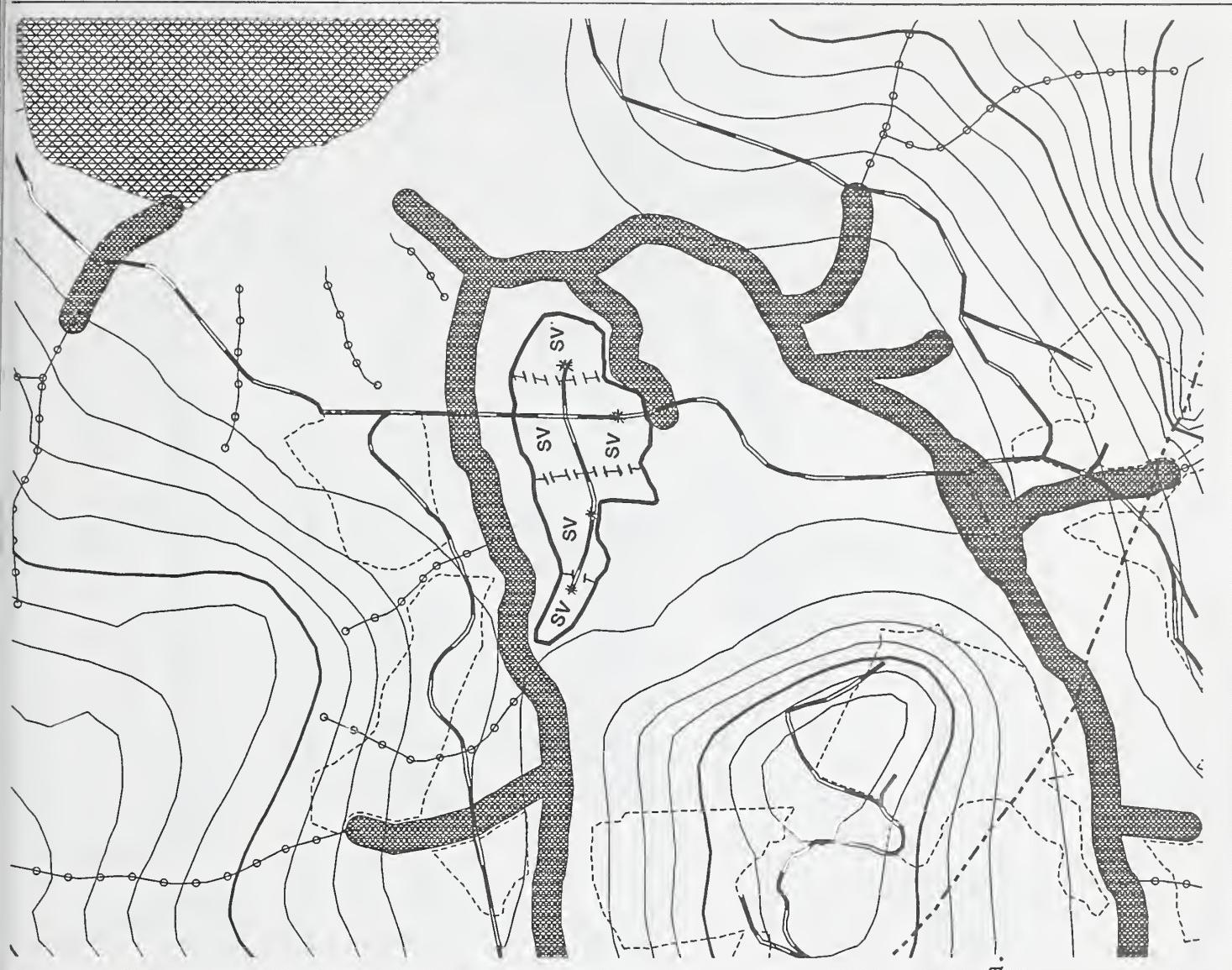
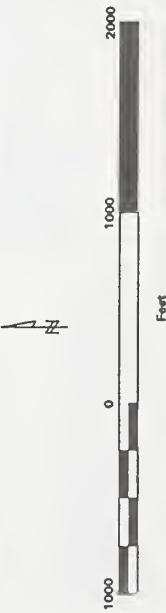
### Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

## IDT Review

Boundary of FEIS Unit 101 is adjusted for fisheries concerns. Spur in SW of unit is dropped.

M.T. Weber



**PROJECT: USFS  
RESOURCE (Name/Date)**

**MANAGEMENT AREA:**

**LUD: VCU: 279 UNIT: 101**

**ACRES: 27  
RESOURCE CONCERNs (INCLUDING MGT. OBJECTIVES & MITIGATION)**

Timber/Silviculture	Type	X45	Acres	Total/Avg	Recommend clear-cut system. Natural regeneration of hemlock should be adequate, planting of vc may be necessary to maintain species composition. A RT at ~15-20 yrs may be necessary to enhance growth.
Bland Exam: 7/9/92	MBF/species				Predominantly a WH/BB plant assoc. Unit productivity is moderate.
M. White - M. Cox	WH				
Bland Exam Type:	BB				
Variable Plot Fixed plots	YC				
Silvicultural Review:	MH				
7/28/92	Other				
<i>g. Smith</i>	TOTAL				
	MBF/Ac				
	Prevalent				
	Plant Assoc.	110			
	Site Index				
	Regen Method				
	Gross Growth				
	H. Goshawk	None	Observed		
	Wind Hazard (H.W.)	N	>T		
	Damages (insect, disease, animal, etc.)				
<b>LOGGING/TRANSPORTATION</b>					
Landing: 101 - 1	Profile:	7/8/92			
Field Review:	7/8/92				
<b>WATERSHED/FISHERIES</b>					
6/26/92	Off	7/8/92			
Field Review:	7/17/92		PLS		
<b>SOILS/GEOLOGY</b>					
Field Review:	OSU		7/23/92		
<b>WILDLIFE/SUBSTINENCE</b>					
Field Review:	VLA		7/22/92		
<b>VISUAL/RECREATION</b>					
VAC:	PP	LOW			
Perspective Plot:	LOW	MEDIUM			
ROC:	LOW	HIGH			
Recreation Site:	LOW	HIGH			
Trail:	LOW	HIGH			
<b>ARCHEOLOGICAL</b>					
CULTURAL					
Field Review:	7/14-92				
Field Review:	M. K. 113				

# Harvest Unit Design Card

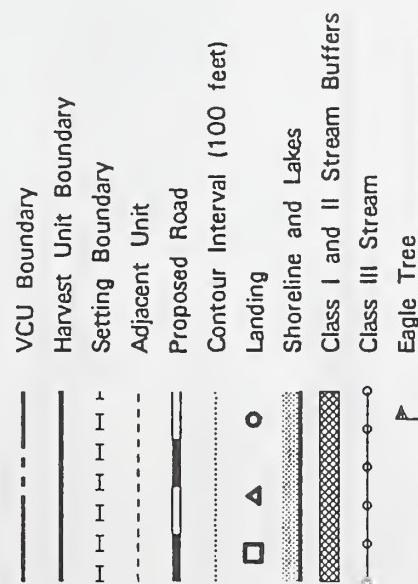
## Ushk Bay EIS

Harvest Unit: 102  
 VCU: 279  
 Alternative(s): ROD

### Photo Information

Year: 1986  
 Flight Line: 26  
 Photo Number: 12-13

### Legend



### Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

### IDT Review

"Finger" in SW of FEIS Unit 102 is changed to a helicopter setting to maximize yarding efficiency

M.J. Weber



## UNIT LOCATION NAME

PROJECT: USHK

LUD:

VCU:279/280 UNIT: 102

ACRES: 40

## RESOURCE (Name/Date)

## MANAGEMENT AREA:

## TIMBER/SILVICULTURE

Acres

MBF/species

Stand Exam:

J. Allen / T. Pusina 7/12/92

## Stand Exam Type:

plots

## Silviculturalist Review:

A. Smith

7/28/92

## WATERSHED/FISHERIES

Field Review:

7/4/92 AFZ

## SOILS/GEOLOGY

Field Review:

DMS 8/17/92

## WILDLIFE/SUBSTINENCE

Field Review:

VLA 7/22/92

## VISUAL/RECREATION

Field Review:

VLA 7/22/92

## ARCHEOLOGICAL/CULTURAL

Field Review:

N/A

## RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES &amp; MITIGATION)

Tim Type	X44	H44	TOT/HVO					
Acres								
MBF/species								
WH								
88								
YC								
MH								
Other								
TOTAL								
MBFIAC								
Presented	140	210						
Plant Assoc.								
Site Index								
Regen Method								
Gross Growth								
N. Growth								
Wind Hazard (H.M.L.)								
Damage (insect, disease, animal, etc.)								
<b>LOGGING/TRANSPORTATION</b>								
Landing/102-1, 102-2								
Profiles:	7/22	6-29-92						
Field Review:	7/22	AFZ						
Field Review:	DMS	8/17/92						
<b>CUTTING SYSTEM</b>								
Tim Type	X44	H44	TOT/HVO					
Acres								
MBF/species								
WH								
88								
YC								
MH								
Other								
TOTAL								
MBFIAC								
Presented	140	210						
Plant Assoc.								
Site Index								
Regen Method								
Gross Growth								
N. Growth								
Wind Hazard (H.M.L.)								
Damage (insect, disease, animal, etc.)								
<b>CUTTING SYSTEM</b>								
Tim Type	X44	H44	TOT/HVO					
Acres								
MBF/species								
WH								
88								
YC								
MH								
Other								
TOTAL								
MBFIAC								
Presented	140	210						
Plant Assoc.								
Site Index								
Regen Method								
Gross Growth								
N. Growth								
Wind Hazard (H.M.L.)								
Damage (insect, disease, animal, etc.)								
<b>CUTTING SYSTEM</b>								
Tim Type	X44	H44	TOT/HVO					
Acres								
MBF/species								
WH								
88								
YC								
MH								
Other								
TOTAL								
MBFIAC								
Presented	140	210						
Plant Assoc.								
Site Index								
Regen Method								
Gross Growth								
N. Growth								
Wind Hazard (H.M.L.)								
Damage (insect, disease, animal, etc.)								
<b>CUTTING SYSTEM</b>								
Tim Type	X44	H44	TOT/HVO					
Acres								
MBF/species								
WH								
88								
YC								
MH								
Other								
TOTAL								
MBFIAC								
Presented	140	210						
Plant Assoc.								
Site Index								
Regen Method								
Gross Growth								
N. Growth								
Wind Hazard (H.M.L.)								
Damage (insect, disease, animal, etc.)								
<b>CUTTING SYSTEM</b>								
Tim Type	X44	H44	TOT/HVO					
Acres								
MBF/species								
WH								
88								
YC								
MH								
Other								
TOTAL								
MBFIAC								
Presented	140	210						
Plant Assoc.								
Site Index								
Regen Method								
Gross Growth								
N. Growth								
Wind Hazard (H.M.L.)								
Damage (insect, disease, animal, etc.)								
<b>CUTTING SYSTEM</b>								
Tim Type	X44	H44	TOT/HVO					
Acres								
MBF/species								
WH								
88								
YC								
MH								
Other								
TOTAL								
MBFIAC								
Presented	140	210						
Plant Assoc.								
Site Index								
Regen Method								
Gross Growth								
N. Growth								
Wind Hazard (H.M.L.)								
Damage (insect, disease, animal, etc.)								
<b>CUTTING SYSTEM</b>								
Tim Type	X44	H44	TOT/HVO					
Acres								
MBF/species								
WH								
88								
YC								
MH								
Other								
TOTAL								
MBFIAC								
Presented	140	210						
Plant Assoc.								
Site Index								
Regen Method								
Gross Growth								
N. Growth								
Wind Hazard (H.M.L.)								
Damage (insect, disease, animal, etc.)								
<b>CUTTING SYSTEM</b>								
Tim Type	X44	H44	TOT/HVO					
Acres								
MBF/species								
WH								
88								
YC								
MH								
Other								
TOTAL								
MBFIAC								
Presented	140	210						
Plant Assoc.								
Site Index								
Regen Method								
Gross Growth								
N. Growth								
Wind Hazard (H.M.L.)								
Damage (insect, disease, animal, etc.)								
<b>CUTTING SYSTEM</b>								
Tim Type	X44	H44	TOT/HVO					
Acres								
MBF/species								
WH								
88								
YC								
MH								
Other								
TOTAL								
MBFIAC								
Presented	140	210						
Plant Assoc.								
Site Index								
Regen Method								
Gross Growth								
N. Growth								
Wind Hazard (H.M.L.)								
Damage (insect, disease, animal, etc.)								
<b>CUTTING SYSTEM</b>								
Tim Type	X44	H44	TOT/HVO					
Acres								
MBF/species								
WH								
88								
YC								
MH								
Other								
TOTAL								
MBFIAC								
Presented	140	210						
Plant Assoc.								
Site Index								
Regen Method								
Gross Growth								
N. Growth								
Wind Hazard (H.M.L.)								
Damage (insect, disease, animal, etc.)								
<b>CUTTING SYSTEM</b>								

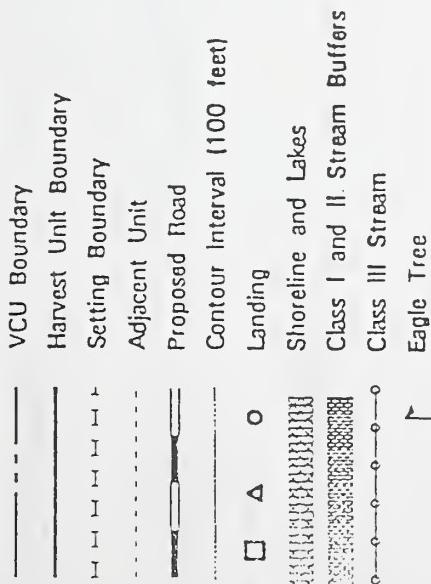
# Harvest Unit Design Card Ushk Bay EIS

Harvest Unit: 105  
VCU: 279  
Alternatives): ROD

## Photo Information

Year 1986  
Flight Line 27  
Photo Number 55

### Legend



Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

### IDT Review

The southern boundary of FEIS unit 105 is adjusted to address concern for visuals from the ferry route.

M.J. Weber



# UNIT DESIGN CAHU

MANAGEMENT AREA:

PROJECT: USHK  
LUD: VCU: 279 UNIT: 105 ACRES: //

## RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)

RESOURCE/SILVICULTURE	Tim Type	X44	X45	TOT/AVG
Acres				
MBF Specied				
WH				
BB				
YC				
MH				
Other				
<b>TOTAL</b>				
MBF/Ac				
Precld	110	110		
Plant Assoc.				
Site Index				
Regen Method				
Gross Growth				
H. Goshawk	Worm	Scree		
Wind Hazard (H M L H)				
Damag (Insect, disease, animal, etc.)				

## LOGGING/TRANSPORTATION

Lending: 105-1, 105-2  
Profile:

Field Review: Sp 22 8/1/92  
WATERSHED/FISHERIES

PIGS 7-19-92  
Field Review:

DMR 8/5/92

## SOILS/GEOLOGY

OSW 7/24 92  
WILDFIRE/SUBSTANCE

VLA 7/22/92

## VISUAL/RECREATION

Perspective Plot:

Field Review: CEF 7/26/92  
ARCHEOLOGICAL

CULTURAL

Field Review: N/A

Sland Exam: 7/29/92 S. Allen + T. Pusina Sland Exam Type: Walk through Silvicultural Review: S. J. Smith 7/29/92	Y	Y	Y	

Suggested system is clear-cut. Natural regeneration of hemlock should be adequate. However planting of either spruce and yellow cedar is recommended to maintain current species composition. Spruce is a good component of the stand on upper slopes, while yellow cedar is common on lower slopes. Pre-commercial thin in 15 - 20 yrs. Main thin 2 acre / acre if possible. Predominant plant association is WH/BP, a moderately productive site, and WH-BCLB/SC, also moderate, is found in the NE portion. An old log down is evident on the ridge (now an connection between N + S portion), resulting in dense mixed trees.

Helicopter yard direct to LTF. Log retention is safety issue.  
  
Log away from V-notch damage area. Remove consider retaining remaining pines, remove cuttings near stream. Consider minimum distance of 100' and riparian well lands. Better to cut it and stream should be a minimum of 100' and wind firm. No fisheries concern.

& Protect V-notches, slides, and chutes to windfall areas. And retain the heads and bases of trees of interest, slides, scours, slides, scours in the middle. After all the shoulder of the cuts & basins on the NW portion of unit will result in loss of high quality habitat for other moderate quality habitat for brown bear and loss of estuary habitat. Consider maintaining unharmed buffer 100' feet wide around spring habitat. Eagle nest tree #3 to protect perchng habitat. Would not meet pos. guidelines Eastern portion may be detectable from Amtt. NO GROUP SELECTION OR SHELTERWOOD CUT TO BEAN. CONTRAST TO MIDDLEGROUND VIEWS

Outside Sensitive Area - No Survey Necessary  
  
Cut no below the ridges on the east facing slope near the EAST boundary. USE DARTAL LOG suspension at the left. FIELD REVIEW STABILITY ONE NO Layout

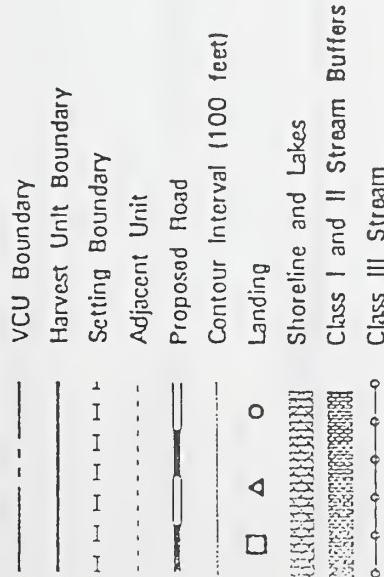
# Harvest Unit Design Card Ushk Bay EIS

Harvest Unit: GROUP I  
VCU: 281  
Alternative(s): ROD

## Photo Information

Year 1986  
Flight Line 27  
Photo Number 52-54

## Legend



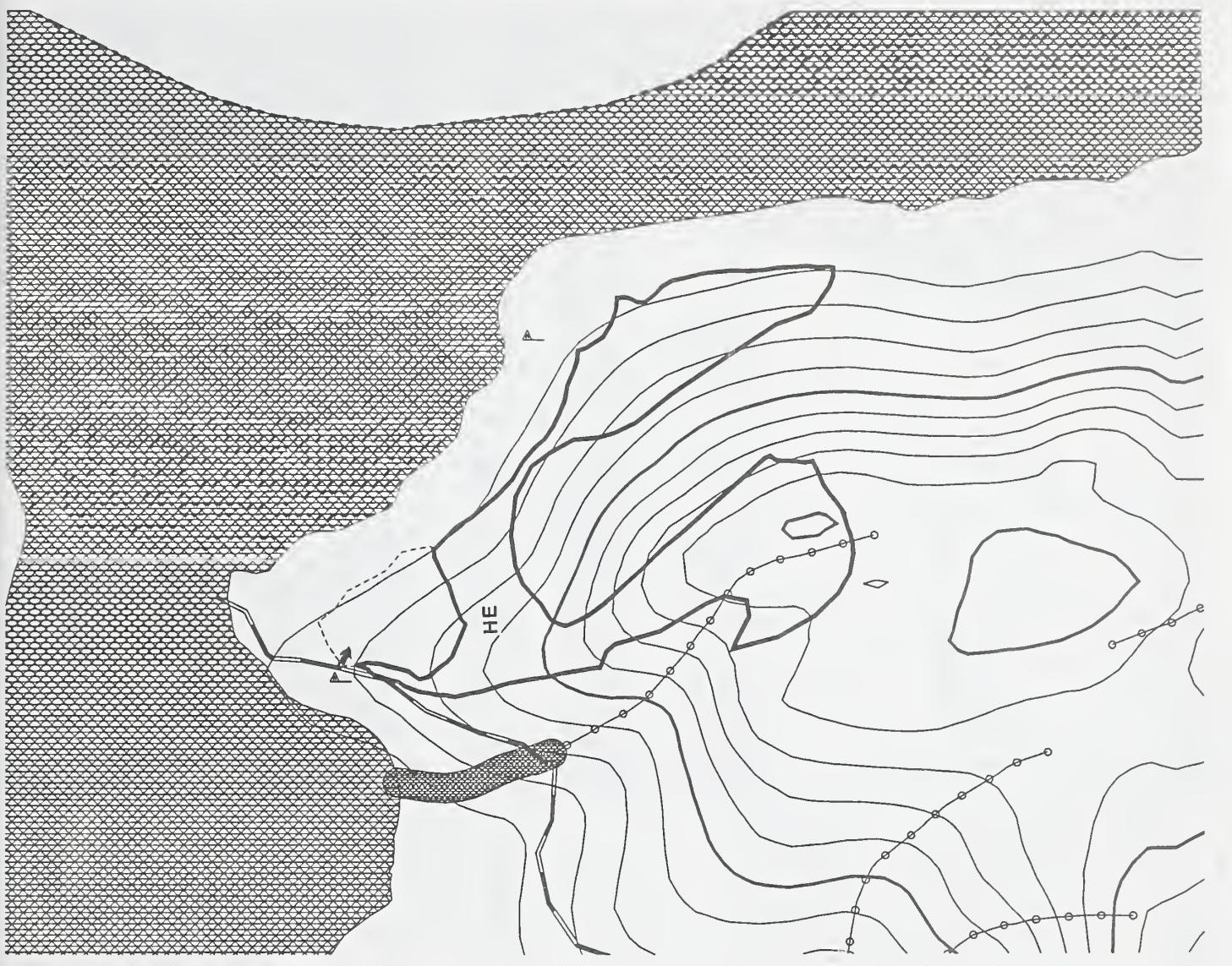
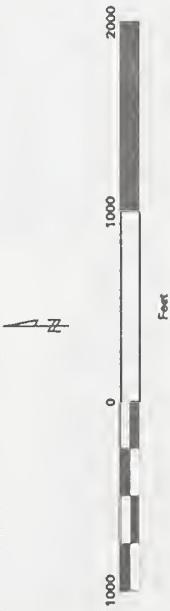
## Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

## IDT Review

The northern boundary of FEIS Group I is adjusted to exclude area in ROD Unit 105.

M.T. Weber



## UNIT DESIGN CARD

PROJECT NUMBER:		MANAGEMENT AREA:		LUD: III VCU: 279 UNIT: Group I ACRES: 64 (16 cut)	
RESOURCE (Name/Date)				RESOURCE CONCERN'S (INCLUDING MGT OBJECTIVES & MITIGATION)	
TIMBER/SILVICULTURE		TOTAL	X 44 X 45		
Stand Exam: 7/29/92 S. Allen, T. Pusina Stand Exam Type: Plots	Acres				
	Wet/Topsoil			Suggested silvicultural system is group selection because	
	WH			of visual concern. Groups to be approximately 2 acres in	
	ca			size and should occupy no more than 25 percent of	
	ro			total unit area. Concentrate groups in areas that	
	WH			provide some shelter from the wind. The Unit should	
	Cuts			be helicopter logged.	
	TOTAL				
	Wet/Log				
	Previous				
	Plant Assoc.				
	Bio Index				
	Regen Method				
	Gross Growth				
	N. Growth				
	Wind Hazard (H, M, L)				
	Damge (wind, disease, animal, etc.)				
LOGGING/TRANSPORTATION				HELICOPTER YARD TO LANDINGS IN UNIT 105	
Landing:				OR TO POISON COVE LTF	
Profiles:				E# 7/29/92	
Field Review:					
WATERSHED/FISHERIES					
Field Review:					
SOILS/GEODESY				No soils concerns noted.	
Field Review:					
WILDLIFE/SUBSISTENCE					
Field Review:				Avoid repeated helicopter flights within $\frac{1}{4}$ mile of active bald eagle nests. Maintain helipads and helicopter flight paths at least $\frac{1}{4}$ mile from active nests.	
VISUAL/CREATION	VOC:	PETITION			
	VAC:	Low			
	Visibility:	High			
	NOFS:	Spin			
Field Review:	6/16/1992	Recreation Site:			
ARCHEOLOGICAL		Trail:			
CULTURAL					
	Field Review:				

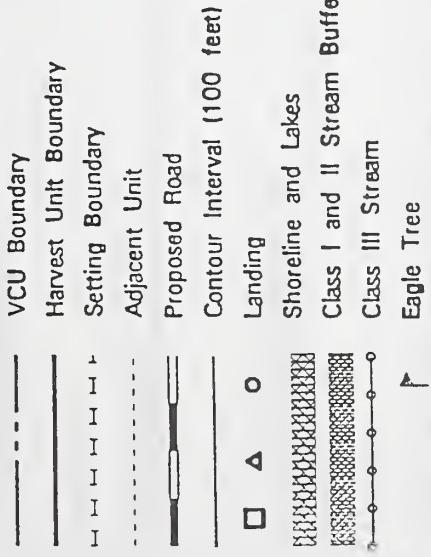
# Harvest Unit Design Card Ushk Bay EIS

Harvest Unit: GROUP II  
VCU: 279  
Alternative(s): ROD

## Photo Information

Year 1986  
Flight Line 27  
Photo Number 56-58

### Legend



Logging System  
RS Running Skyline  
SL Slackline  
SSL Small Slackline  
H Highlead

HE Helicopter  
SV Shovel  
GR Gravity return

IDT Review

Harvest acres in Group II are adjusted down to 20% of unit acres as further assurance that the remaining trees will be windfirm and to address concern for visuals from the ferry route.

M.J. Weber



## PROJECT: SUSURUS MANAGEMENT AREA:

LUD: III/xx VCU: 279/1011 UNIT: Group II ACRE: 267 (53% cur)

RESOURCE/SILVICULTURE	NAME/DATE	MANAGEMENT AREA:	RESOURCE CONCERN INCLUDING HGT OBJECTIVES & MITIGATION
TIMBER/SILVICULTURE			
Stand Exam: 6/29 & 6/30/92 S. Allen, T. Pasini, M. White, K. Gob Stand Exam Type: Plots	MEF Species Acres WH BB YO NH Other TOTAL DIF/FIC Present Plant Abund Bio Index Regen Method Grove Growth R. Growth Wind Severe Wind Hazard (H/M/L) M to H Density (good, dense, uniform, etc.) Some - don't know	X44 X45 X44 X44 X45 X44 TOTAL	Support silvicultural system as group selection because of visual concern. Groups to be approximately 2 acres in size and should occupy no more than 20 percent of total unit area. Compartite groups in areas that provide some shelter from the wind. The units should be helipter logged.
LOGGING/TRANSPORTATION			
Landing: Prefiles: Field Review:			
WATERSHED/FISHERIES			
Field Review:			
SOILS/GEOLOGY			
Field Review:			Avoid and protect high mass movement hazard areas to wind/tim.
WILDFIRE/SUBSISTENCE			Avoid repeated helo flights within 1/4 mile of active bald eagle nests. Maintain 1/4 mile distance between helicopter landing pads and heliports and active nests.
VISUAL/RECREATION			WIND: NOT. MEET POS. WOULD BE VISIBLE FROM AMH. GROUP SELECTION WOULD PRODUCE CONTRACT IN middle ground views.
Perspective Plot: Field Review:	PP Low W.L. 2pm/8am Recreation Site: Tall:		
ARCHEOLOGICAL CULTURAL			Outside High Sensitivity Area, No cultural resources survey required.
Field Review:			S. Flint 7/9/92

# Harvest Unit Design Card Ushk Bay EIS

Harvest Unit: GROUP III

VCU: 279

Alternative(s): ROD

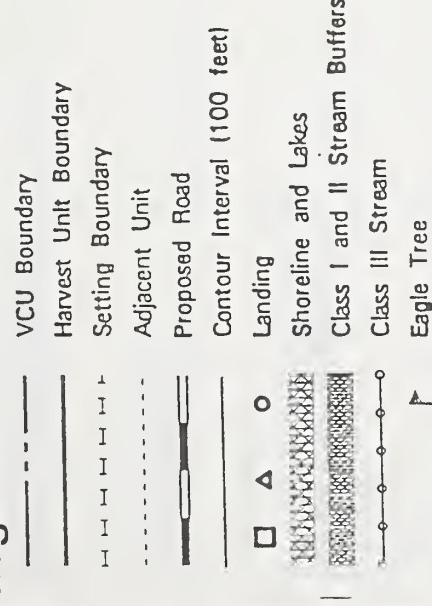
## Photo Information

1986

Flight Line 27

Photo Number 61-63

## Legend



Logging System	RS	Running Skyline	HE	Helicopter
	SL	Slackline	SV	Shovel
	SSL	Small Slackline	GR	Gravity return
H		Highlead		

## IDT Review

Harvest acres in Group III are adjusted down to 15% as further assurance that the remaining trees will be windfirm and to address concern for visuals from the ferry route.

M.J. Weber





# **Appendix 3**

## **Road Management Objectives (RMOs) for the Selected Alternative**



**Appendix 3**  
Ushk Bay Road Management Objectives for the Selected Alternative

VCU NUMBER	ROAD NUMBER	ROAD MILES	ROAD STATUS	SERVICE LIFE	TRAFFIC LEVEL	SERVICE CLASS	FUNCT. LEVEL	POST-HARVEST MAINT. LEVEL	POST-HARVEST ACCESS NEEDS/TRAFFIC STRATEGIES			POST-HARVEST RESOURCE CONCERNs (SEE ROAD CARDS)		
									<sup>4</sup> FUTURE COMM VOL	SILVIC/ ADMIN	PUBLIC/ RECREATION	HYDRO/ SOILS	W/L STS.	FISH
279	7516 S	2.94	P	<sup>1</sup> INTERMITTENT	D	C	2	3	1	NO	NONE	DISCOURAGE	X	X
75166	1.03	P	INTERMITTENT	D	C	1	NO	NO	NO	NO	NO	DISCOURAGE	X	X
751665	1.54	P	INTERMITTENT	D	C	1	NO	NO	NO	NO	NO	DISCOURAGE	X	X
7517	0.81	P	INTERMITTENT	D	L	1	NO	NO	NO	NO	NO	DISCOURAGE		
75172	0.10	P	INTERMITTENT	D	L	1	NO	NO	NO	NO	NO	DISCOURAGE		X
280	7516 S	3.73	P	INTERMITTENT	D	C	1	NO	NO	NO	NO	DISCOURAGE		
75166	0.87	P	INTERMITTENT	D	L	1	NO	NO	NO	NO	NO	DISCOURAGE		
281	7516 N	1.85	P	INTERMITTENT	D	C	1	NO	NO	NO	NO	DISCOURAGE	X	X
751601	0.50	P	INTERMITTENT	D	L	1	NO	NO	NO	NO	NO	DISCOURAGE	X	X
751603	0.15	P	INTERMITTENT	D	L	1	NO	NO	NO	NO	NO	DISCOURAGE	X	X
7518	8.25	P	INTERMITTENT	D	C	1	NO	NO	NO	NO	NO	DISCOURAGE		X
75184	1.08	P	INTERMITTENT	D	L	1	NO	NO	NO	NO	NO	DISCOURAGE		X
751843	0.55	P	INTERMITTENT	D	L	1	NO	NO	NO	NO	NO	DISCOURAGE		X
75185	1.30	P	INTERMITTENT	D	L	1	NO	NO	NO	NO	NO	DISCOURAGE	X	X
75186	1.63	P	INTERMITTENT	D	L	1	NO	NO	NO	NO	NO	DISCOURAGE	X	X
7518608	0.32	P	INTERMITTENT	D	L	1	NO	NO	NO	NO	NO	DISCOURAGE	X	X
7518609	0.43	P	INTERMITTENT	D	L	1	NO	NO	NO	NO	NO	DISCOURAGE		X

<sup>1</sup> Intermittent Service Life refers to roads developed and operated for periodic service and closed for more than one year between periods of use.

<sup>2</sup> Functional Class C refers to collector roads that are forest roads serving smaller land areas than an arterial road and usually connects forest arterial roads to forest local roads or terminal facilities. Collector roads are usually long term facilities. Functional Class L refers to local roads that are forest roads connecting terminal facilities with forest collector or forest arterial roads. Usually forest local roads are single purpose transportation facilities and can either be long or short term in nature.

<sup>3</sup> Maintenance Level 1 infers that drainage structures may be removed, the roadbed is seeded and the road allowed to naturally close after use. Basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level.

<sup>4</sup> Future commercial volume refers to volume scheduled for the foreseeable future in the Chatham Area Timber Sale Schedule. See Chapter 4, page 9, in the FEIS.

## **Appendix 3 R.O.D.**

### **Note to the Selected Alternative Road Management Objectives**

Road number 7516N in the selected alternative consists of road segments displayed on Road Card number 7516H and 7516G as shown in Appendix C of the FEIS. Road number 7516S in the selected alternative consists of road segments displayed on Road Card number 7516A, 7516B, 7516C and portions of 7516D and 751607 as shown in Appendix C of the FEIS. Road number 7518 in the selected alternative consists of road segments displayed on Road Card number 7518C, 7518B and a portion of 7518A as shown in Appendix C of the FEIS. These road segments are for major transportation links that are too long to display on a single road card at a reasonable scale.

# **Appendix 4**

## **Proportion of Volume Classes 6 and 7 Planned for Harvest in the Selected Alternative**



## Proportion of Volume Classes 6 and 7 Planned for Harvest for the Selected Alternative

The following is a summary of the analysis of the planned timber harvest for the Selected Alternative to determine compliance with the proportionality requirement of the Tongass Timber Reform Act (TTRA), Section 301(c)(2). This determination was made following the procedure contained in Forest Service Handbook 2409.18 Region 10 Supplement No. 2409.18-93-3. Tables 4-1 and 4-2 show the current land base distribution of volume classes and proportionality projections for the Selected Alternative based on the GIS TIMTYP layer per handbook direction.

Table 4-1

Selected Alternative - TTRA Proportionality for Management Area C39

	Total Timber Base (acres)	Volume Classes 4 & 5 (acres)	Volume Classes 6 & 7 (acres)	Proportionality
Current Land Base	11,243	10,949	294	2.61%
Selected Alternative Planned Harvest	-1,581	-1,539	-41	
Projected Proportionality	9,662	9,410	253	2.62%

Source: Regan, 1994

Note: This data was derived from the Chatham Area GIS, TIMTYP data layer

Proportionality = (Volume Classes 6 & 7 acres/Total Timber Base acres) × 100



Table 4-2

**Selected Alternative - TTRA Proportionality for Management Area C40**

	Total Timber Base (acres)	Volume Classes 4 & 5 (acres)	Volume Classes 6 & 7 (acres)	Proportionality
Current Land Base	52,331	51,867	464	0.89%
Selected Alternative Planned Harvest	-595	-590	-5	
Projected Proportionality	51,736	51,277	459	0.89%

Source: Regan, 1994

Note: This data was derived from the Chatham Area GIS, TIMTYP data layer

$$\text{Proportionality} = (\text{Volume Classes 6 \& 7 acres} / \text{Total Timber Base acres}) \times 100$$

The Selected Alternative is projected to result in proportionality consistent with the requirements of the TTRA for Management Areas C39 and C40.

# **Appendix 5**

## **Selective Harvest**

## **Evaluation Monitoring**

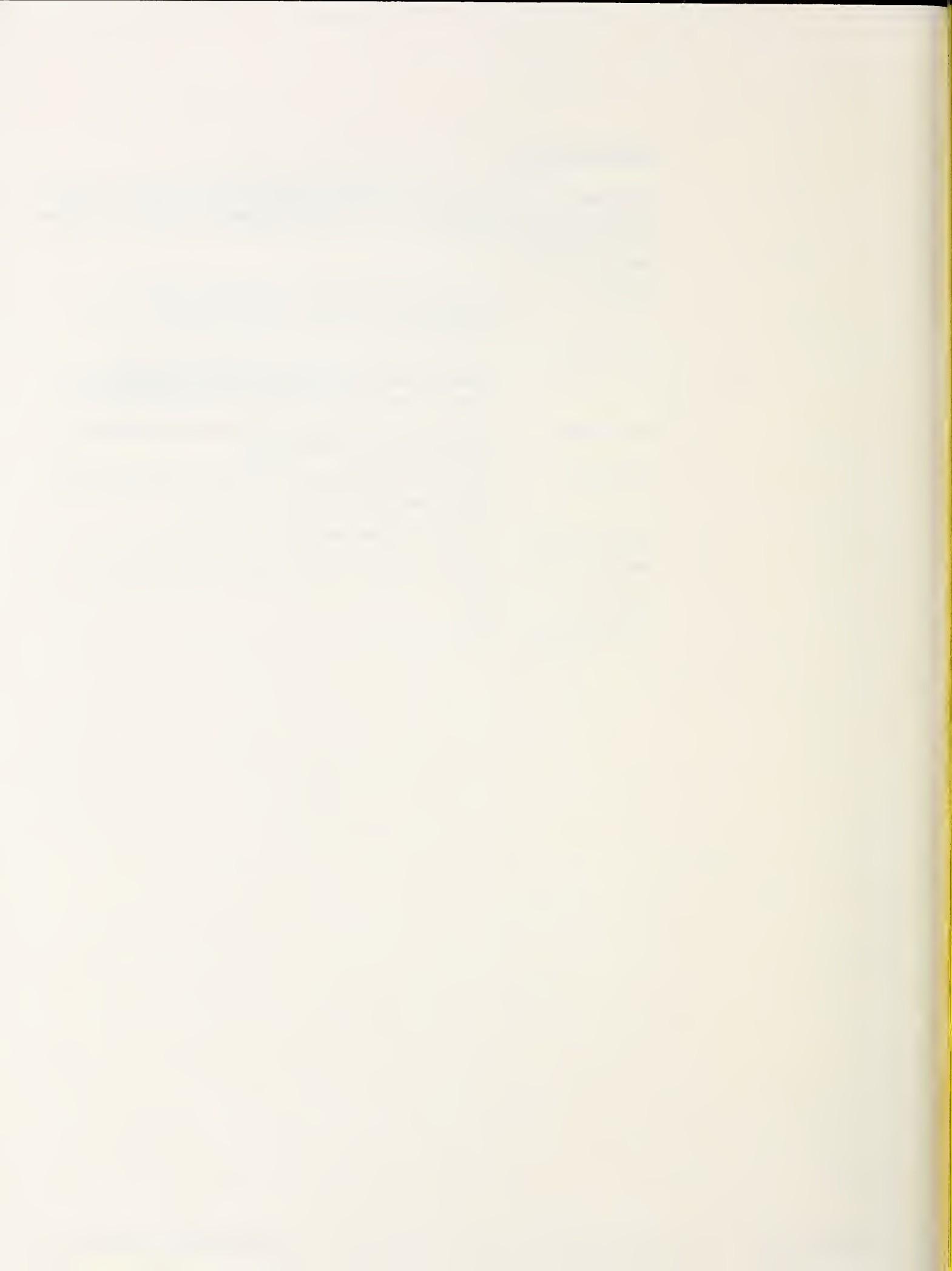


# Monitoring

The following is a description of the effectiveness monitoring activity expected to take place in conjunction with the Ushk Bay Selected Alternative in addition to the monitoring activities described in the FEIS Appendix I.

## Selective Harvest

<b>Objective:</b>	To evaluate the effectiveness of the selective harvest prescriptions for Groups I, II, and III in mitigating visual impacts along the ferry route in Peril Strait
<b>Desired result:</b>	The Groups will not experience management induced windthrow because of the selective harvest prescriptions and will meet a Visual Quality Objective of Partial Retention
<b>Measurement:</b>	Calculate the VQO following timber harvest and periodically spot-check the Groups windfirmness
<b>Evaluation:</b>	Determine if a Partial Retention VQO was achieved and if the residual trees within Groups are windfirm
<b>Responsible staff:</b>	Landscape Architect and District Timber staff
<b>Record of results:</b>	Results documented in a short report to Forest Supervisor
<b>Annual cost:</b>	\$1,000
<b>Personnel needs:</b>	None





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